



# APPLYING THE RISK INDEX AS A HIGH PRIORITY IN THE PLACE 2005-2006



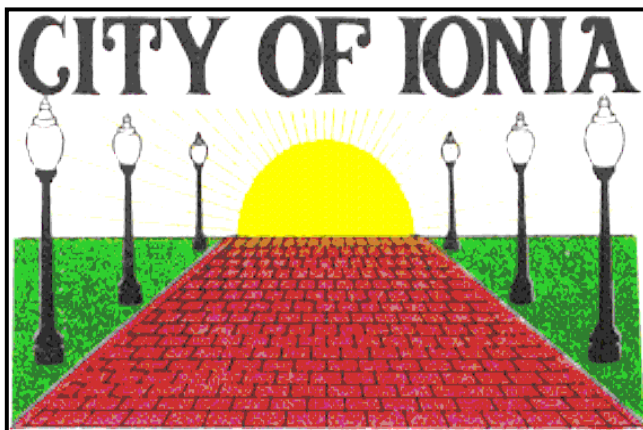


# *City of Ionia: A new approach for a new century*

## **ACKNOWLEDGEMENT**

This is the second Asset Management Report generated by the City of Ionia and reflects considerable efforts of many individuals.

We would be remiss to not acknowledge the efforts of the State of Michigan Transportation Asset Management Council and, in particular, staff from the Michigan Department of Transportation. They have worked tirelessly in establishing the Asset Management System for the State of Michigan and those efforts have been recognized at the national level. Michigan is truly leading the states in the effort to convert from the traditional “tactical” approach of fixing “worst first” and instead moving to a projected, planned improvement approach.



The City of Ionia has benefited greatly from those efforts and its involvement in the Asset Management process. For the first time, the systems of the City were reviewed on a component basis. It has not been surprising that those roads with the worst surface condition ratings have also had the oldest underlying infrastructure. The correlation between older infrastructure, insufficient or defective base, and the ultimate wearing condition of the road are found to be one and the same. Much work has been done to alleviate the underlying issues. In particular, considerable work was done to age the infrastructure under the surfaces of the City's streets and also tie in other parts of the overall rights-of-way inventory. The reports and data that have been derived and can be found in this report indicate that original strategies adopted by the City may have to be adjusted. In addition, the graphs and charts are also indicative of the considerable work that has already taken place.

Fixing one component without acknowledging the others is not the best use of the limited resources of the City and thus long range plans include looking at all of the individual parts as they relate to the whole of the final right-of-way corridor.

Work continues to address specifics that are still lacking in a full blown asset management strategy. During the past year, 2004-2005, much was



done to determine, map, and evaluate the age of the infrastructure in the City. This will prove invaluable as the process builds and moves forward. In particular, as the obvious deficient areas are addressed, this data will prove to be the source for decisions that are to be made in the future; to keep the infrastructure in a “good” condition and avoid moving towards structure improvement. This data will be the basis of those decisions.



## **INTRODUCTION**

All incorporated areas rely on an infrastructure system of some type that provides the resources which enable them to compete on a global basis. These systems include a road system, potable water system, and sanitary and storm sewer collection and treatment systems. In addition to these mandatory services, most businesses require some type of a quality of life from the incorporated area that enables it to hire and retain workers and their families. These may include parks and recreation, public safety (police and fire), health departments, medical care, and many others.

This infrastructure provides the fabric for modern living which is, for the most part, taken for granted until it fails, is failing or requires significant investment to maintain its usefulness. It is a major investment that largely goes unnoticed or unappreciated until such time as it nears the point of failure (or failure actually occurs). Because much of the in-ground investment can last for periods exceeding the normal lived-span, without proper management of these assets, failure is the first indication that the system requires improvement or replacement.

The “International Infrastructure Management Manual” lists five compelling reasons for ensuring that the best practices are applied to a total infrastructure:

1. Infrastructure networks provide the platform for economic and social development
2. Good quality infrastructure is the cornerstone of public health and safety.
3. Risk management practices safeguard long-term returns to shareholders.
4. Infrastructure and property assets increasingly meet recreational and other needs of the community.
5. Benchmarking condition and performance promotes innovation and efficiencies.

Asset Management is defined in the “Transportation Asset Management Guide” prepared for National Cooperative Highway Research Program as, “A strategic approach to managing transportation infrastructure.”

Expanding that definition to account for a complete infrastructure Asset Management process could be put simply, “A strategic approach to managing infrastructure.”

Driving the City of Ionia’s decision to continually broaden the approach to management of its infrastructure resources have been several State of Michigan and National Policy objectives.

- State of Michigan, Public Act 499 of 2002, ***An asset management strategy***, requires that the road and transportation system be viewed strategically versus the traditional tactical view. This type of visualization



moves roads and the transportation system closer to management as a utility. The investment is required to be managed utilizing a strategy, something which firmly places Michigan at the head of states making the conversion. All states are doing some type of asset management; none have raised the bar to the level of Michigan.

- State of Michigan, Public Act 9 of 2004, Transferring Funds, allows communities with approved asset management programs to transfer additional funds from the Major Street system to the Local Street system.

Under an asset management approach, it is not sufficient for a community to say a road is “well, okay.” Would we allow a community to say that their drinking water is “well, okay?” Instead, we demand to know what the condition of the utility is. What is in the water or not in the water; we demand concise, specific condition data. The same is true with treated sanitary sewage and storm water. PA 499, complimented by Public Act 9, enlarges that view to roads and rights-of-way investments.

- GASB 34, ***a reporting method***, changes the way that municipal finances are accounted. Municipal government accounting will be converted over to a financial accounting model that enables anyone to look at the audit and determine where their contributions (in taxes, fees, or other charges) have been invested. What is the value of the infrastructure in the community? What are the fixed assets and how are they recorded/valued in the community? How are these assets being managed? Most businesses have always reported in this manner. Now, municipalities are being moved to the same standard.

Moving towards a complete, integrated Asset Management Strategy means that the City Council has a fiduciary responsibility over the assets of the City. For the first time roads, which have never been looked at in a traditional utility model have been moved from the tactical management model to a strategic process using Asset Management concepts.

A fiduciary responsibility simply means that we are trustees of an asset that has been invested in by the public. We have a responsibility to build, to maintain, and to manage that asset in an effective and efficient manner so as to protect the investment.

While sanitary and storm sewers and potable water mains are supposed to be viewed with an asset management strategy (although in reality few are because of recording issues), roads have never been viewed in this regard. Roads were built and then the task of maintaining the road system was haphazard at best.

Adopting an asset management strategy means that all roads, all water mains, all sewer lines, all storm sewers are regularly evaluated as to condition. By moving towards an aggressive maintenance program, large capital investments can be deferred as the system is able to function for its intended life. Without routine and regular maintenance, systems break down, are not dependable, are not efficient. Does anyone want to drink from leaking water mains that are not



maintained? Would you allow sanitary sewers to seep or discharge into streams and waterways? The answer is no. We also need to be stewards of the transportation system that has been entrusted to us—just as aggressively.

By adapting to an asset management strategy like many of the world's countries (in particular Australia and New Zealand), the goal is to take steps that will cost-effectively preserve the utility. As an example, we have been cleaning wells on a more frequent basis but as a result, larger, capital investments are able to be made less frequently. The wells break down less frequently and are less costly to operate because they are kept in peak efficiency. If a 1,000 gallon per minute well is allowed to deteriorate and falls to pumping 100 gallons per minute – it has to run 10 times as long, using 10 times as much electricity, and wearing the components 10 times as fast. The life of the well is drastically shortened. The larger investments, instead, are spread out over longer periods of time with smaller maintenance projects in the intervening years; the system continues to operate at its optimum levels and all are beneficiaries of such a strategy.

While the first Asset Management Program was officially adopted by Ionia City council in 2004, additional research has taken place that allows better long-range forecasting. The 2005 Asset Management Program incorporates additional water, sanitary and storm sewer, curb and gutter, as well as rights-of-way conditions. Other assets forecasted and integrated into the total process include Public Transit and Parks and Recreational permanent assets which are rated using the same process as that of roads. Work is continuing on broadening the process for 2006 by inclusion of all rights-of-way issues up to and including sidewalks, street signs, street lights (publicly owned, not leased), and trees.



# **INFRASTRUCTURE ASSET MANAGEMENT**

## **An Overview of Asset Management**

The goal of infrastructure asset management is to meet a required level of service in the most cost-effective way through the creation, acquisition, maintenance, operation, rehabilitation and disposal of assets to provide for present and future customers.

According to the *“International Infrastructure Management Manual – Version 2.0, 2002”*, the key elements of infrastructure asset management are:

1. Taking a lifecycle approach
2. Developing cost-effective management strategies for the long-term
3. Providing a defined level of service and monitoring performance
4. Managing risks associated with asset failures
5. Sustainable use of physical resources
6. Continuous improvement in asset management practices.

It is agreed that a formal approach to the management of infrastructure assets is essential in order to provide services in the most cost-effective manner, and to demonstrate this to customers, investors and other stakeholders.

## **Benefits of Improved Asset Management**

The City of Ionia has found a number of benefits that have been derived from its asset management work. Overall, benefits that are normally derived from Asset Management practices fall into the categories of accountability, service management, risk management and financial efficiency.

- **Improved stewardship and accountability by**
  - demonstrating to owners, customers and stakeholders that services are being delivered effectively and efficiently
  - providing the basis for evaluating and balancing service/price/quality trade-offs
  - improving accountability for use of resources through published performance and financial measures
  - providing the ability to benchmark results against similar organizations

***Ionia Results:*** During 2004, we were able to develop data that showed water main breaks were reduced from 19 to 2. In addition, flushing was able to be accomplished and overall water quality complaints were down for the year.

We were able to demonstrate to our customers and the City Council that our efforts would lead to more reliability in the system while maintaining



our status as one of the lowest priced utility systems in our part of the state. Even with nearly \$5.6 million that was shown as necessary to improve both the underlying and overlaying conditions of a portion of the City, Ionia will continue to have the lowest rates for water and sewer service in Ionia, Kent, and Montcalm Counties; lower than any major city in Michigan; and at or below the state-wide average for all systems. It should be noted that when looking at the state-wide average, it includes systems that do not provide secondary treatment for wastewater and do not have the system complexities of Ionia's nor the ability to expand that we enjoy.

Through our publications, we have been able to communicate both the needs and unfunded portions of upgrading the system. We have made use of the internet as well as published media to convey the message to our customers. We were very fortunate to be recognized by our peers in the American Public Works Association as having the National Model for wellhead water protection in the nation. That achievement, coupled with awards from the Michigan Rural Water Association for well-run and professional operation of our system show that in comparison to benchmarks and our peers, we have rated above average (actually at the outstanding level) while providing the service at a rate well below average.

- **Improved communication and relationships with service users by**
  - Improved understanding of service requirements and options
  - Formal consultation/agreement with users on the service levels
  - More holistic approach to asset management within the organization, through multi-disciplinary management teams
  - Improved customer satisfaction and organization image

***Ionia Results:*** During 2004, one of the main undertakings of our teams was to educate the public. All elementary school children, their parents, along with several high school classes received information concerning the utility services, a portion of which dealt with asset management. The comments received back were amazement at the complexity of knowledge required for operation of the potable water and sanitary sewer collection and production systems.

Complaints for the year were reduced with mechanisms in place for 2005-2006 to track numbers. By adding the data sets that have been created, we were able to knowledgably answer many of the common complaints received: you don't flush my area; why? The hydrant on my street has been broken and no one touches it; why? My water is rusty; why? In several cases we were able to provide times of work, employee, comments received, work performed over the past two years on the system and the ultimate result was a very positive impression of the professionalism that is being created in the departments.



A significant effort of the past year is to educate all employees in both the Department of Public Works and Department of Public Utilities (DPW and DPU) on the principles of Asset Management. Programs are being established continually by the State of Michigan's Asset Management Council (TAMC) and that information is being communicated to all levels of our organization.

If Asset Management is to become a way of life and thinking, all employees—from the new hire to the 25 year employee—must be familiar with and be able to explain why we do what we are doing. This elevates the professionalism of the employee and that same professionalism can be communicated to our customers. By the summer of 2005, we will have completed training on all employees in Asset Management.

- **Improved Risk Management by**

- Assessing probability and consequences of asset failure
- Addressing continuity of service
- Addressing the inter-relationships between different networks (the chain is only as good as its weakest link) and risk management strategies
- Influencing decisions on non-asset solutions through demand management.

***Ionia Results:*** Ionia, because of its efforts in Asset Management as well as participation in national accreditation models such as APWA, AWWA, and the Commission for Fire Accreditation International (CFAI), was chosen as a pilot for the development of a new program through the Michigan Municipal League's Insurance Risk Pool. That program, "Risk Management is Good Management" encompasses many of the principles and ideas of the various systems with the belief that a pro-active organization that is addressing probability and consequences prior to events can better manage those events when they do occur or, better still, prevent them from occurring in the first place.

During 2004, one particularly significant event evolved from a record flooding event in the spring. During that event, plans and consequences that had been projected to occur during such incidents were tested in actual conditions. The City's GIS topography system was calibrated against the flow and elevation meters of the U.S. Weather Service and USGS on the Grand River. IT staff were able to accurately predict impacts from the cascade of events during the emergency which enabled emergency workers to react far ahead of events unfolding. From the data and information gathered, future projections have been made that will further minimize damage and impact to roads, water, sewer, and storm systems.

During a similar event in the 1980's, the city spent far more time, shut down at least 10 businesses, had significant impact on the sanitary sewer system, had to close at least two roads, and reacted in crisis



modes. This event, which was actually more significant and reached higher levels, resulted in none of the above.

- **Improved financial efficiency by**

- Improved decision-making based on costs and benefits of alternatives
- Justification for forward works programs and funding requirements
- Recognition of all costs of owning/operating assets over the lifecycle of the assets.

***Ionia Results:*** In preparation for evaluating the strategies that were developed and adopted by the City during 2004, considerable work took place to videotape, dig and check, and otherwise verify conditions of utilities that were in place under the streets in the middle portion of the city. In addition, city council minutes, annual reports and other paper products were reviewed to better place ages on the pieces of infrastructure.

From these data collection efforts, a project list of approximately \$5.6 million was developed. This list would address the most critical and poorest performing assets in the city's system – roads, water, and sewer. In addition, nearly \$1.6 million will be contributed by developers who will impact portions of the city with new growth and that requires improvement to downstream portions of the utility system.

The resulting two year list was approved by City Council, wishing to continue to seek to achieve the strategy goals and objectives. From that point, the determination had to be made on how to pay for the work as well as how to adjust rates.

Utilizing software that was developed for the Michigan Rural Water Association and first tested in Ionia, we were able to live-produce how changing pennies in various rate structures impacted not only the lowest customers but middle and high users of the system as well as the overall budget. The software programs interface with the billing software and budgeting software so that council and public were able to see the impacts of various decision making options. The result was a very informed rate structure setting process—much more complete than any in the past. Ionia continued to be a low priced utility system but with high value product! The elected officials as well as public were able to see how various actions contributed to the overall condition or demise of the system.



## **TOTAL ASSET MANAGEMENT**

The City of Ionia has incorporated the concepts involved in the Infrastructure Asset Management process with the Transportation Asset Management process. In addition, we are expanding the scope of these areas to include total rights-of-way management as well as looking at intermodal options.

### **PUBLIC TRANSIT**

The City of Ionia's Dial-A-Ride system, a public transportation system, has used resources available through the State of Michigan's Department of Transportation to outline all aspects of its operations.

Buses are regularly replaced using guidance provided by both MDOT as well as FHWA. In 2006, three buses are projected for replacement with an additional three buses in 2007. By utilizing the concepts available, we have been able to maintain an excellent fleet with dependable, safe, efficient, and effective service. All of our buses are on aggressive preventive maintenance schedules which adds to the flexibility of the service and efficiency levels. Just like roads, money spent on preventative maintenance and routine maintenance allows the buses to more dependably operate for the life of the fleet.

The system has made use of all forms of funding, not relying on just the state MDOT replacement process. Buses have been replaced using specific earmarks through Representative Vern Ehlers' office in Washington as well as through the Rural Task Force initiatives of TEA-21.

The transportation center has, likewise, been managed using the same process. Using specific earmarks, the roofs were replaced on a replacement cycle in 2003-2004 and utilized newer technology which should extend the next cycle into 2023-2025. Shingles used longer life and replaced canvas awnings that should extend well into 2030-2035. HVAC systems were upgraded utilizing normal cycles with the next replacement in 2025 and all buses are now stored under cover which keeps maintenance deferred due to freeze/thaw and other outside elements (ultra-violet). Door systems were upgraded to take advantage of new insulation processes which helps lower the operating costs by energy efficiency.

The system's radio system was upgraded using the specific earmark process and incorporates interoperability with all city departments. Other departments are using internal funds and Homeland Security dollars to interface with transit so that the ultimate system benefits all agencies and can be expanded not only intra-county but with the State of Michigan's system as well.

### **PARKS AND RECREATION**

Parks and recreation is just beginning to be incorporated into the City's Asset Management system. The City's Grand River Trail has been rated and is being mapped at the time of this report. In addition, all roadways at the Ionia Free



Fairgrounds, a city-owned park (the land, not the buildings) will be inventoried and rated during 2005 for future projections.

As part of the fairgrounds work, there will also be master planning to determine if all of the roadways and what portions need to be maintained. It is possible many of the roadways can be eliminated and used for parking or other purposes. However, without a formal master plan this cannot be determined and to perform extensive work could result in a waste of critical funds.

As both the fairgrounds and trail systems expand, the maintenance of the assets while still in the prevention mode can help extend the life of the underlying asset well beyond normal lives because of limited traffic and usage.

### **TREES AND RIGHTS-OF-WAY**

Approximately 2/3 of the City's trees and other items in the rights-of-way have been located using hand-held GPS and the city's GIS system. Because of past lawsuits involving tree management, the proper documentation of actions taken on the city's trees is viewed as significant risk management. Three years ago a lawsuit was settled whereby a person received a \$4 million settlement.

One of the problems discovered during that process was the lack of data that had been kept on paper record keeping processes. The conversion should help eliminate this issue.

The city also owns and operates more than 400 decorative street lights in the community as well as the overhead Consumer's Power System. The city owned system is regularly maintained but, as it ages, it will be critical to keep records of ballast replacements, new fixtures, globes, and other information. With proper information, decisions can be projected as to investments needed to maintain the system.



# **TRANSPORTATION ASSET MANAGEMENT**

## **An Overview of Asset Management**

Michigan law defines asset management as:

“an ongoing process of maintaining, upgrading and operating physical assets cost effectively, based on a continuous physical inventory and condition assessment.” [MCL 247.659a(1)(a)]

Asset management provides a solid foundation which allows transportation professionals to monitor the condition of the system. Further, it helps them plan how to optimize the preservation, improvement, and timely replacement of assets through cost-effective management, programming, and resource allocation decisions.

Asset management involves collecting physical inventory and managing current conditions based on strategic goals and sound investments. It is a continuous, iterative process enabling managers to evaluate various scenarios, determine trade-offs between different actions, and select the best method for achieving specified goals.

While asset management utilizes the outputs of pavement and bridge management systems, it is much more than just another management system with a fancy name. The significant difference is that, in many respects, pavement and bridge management systems are used in a “tactical” manner, to identify specific projects. Asset management is a “strategic” approach that looks at the network as whole rather than individual projects.

Traditionally, public sector management of roads and bridges has been tactical in nature, concentrating on the immediate and most severe problems. Asset management shifts that thinking to one that is strategic in nature. Decisions are made with regard to the long-range condition of the entire system. This requires considering various investment strategies which will maintain the assets in good condition.

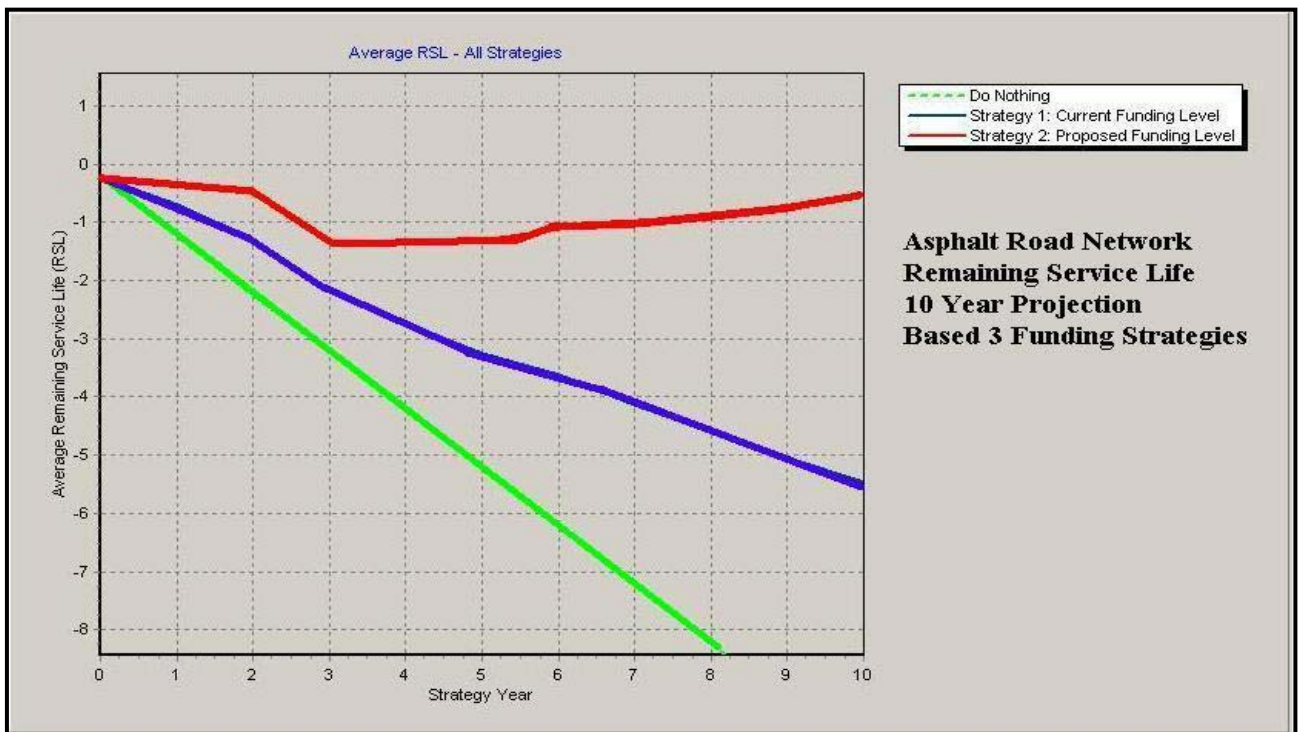
It is crucial in an asset management process to have the ability to forecast future road and bridge conditions and to do investment analyses based on various funding scenarios. The strategic component of the decision-making process entails the ability to assess improvements based on desired outcomes. The strategic focus of an asset management process is supported by network level analysis in addition to the tactical focus of performing location-specific, project-level analysis. This task would include consideration of:

- Current condition of the transportation system and future condition if there is no change in current practices;
- Future condition based on alternative strategies;
- The right time to maintain, preserve, or improve to get maximum useful life from a transportation asset;



- Use preventive fixes or allow an asset to deteriorate to the point of requiring reconstruction;
- Costs and benefits of each decision; and
- Relationship to identified goals and objectives.

The key is a conscious effort required to create and analyze alternatives. It is necessary to focus attention on effectively and efficiently managing and operation our transportation system, rather than merely reconstructing it. The following graph shows what a typical type of strategic analysis might look like.



## **Elements of Pavement Management**

Once a road has been constructed or reconstructed, the condition of the pavement will begin to change over time, due to the effects of weather, environmental factors and traffic loads. Weather factors include the amount of rain/snow, temperatures (particularly extreme heat and cold), humidity, freeze-thaw cycles, exposure to sunlight, etc. Environmental factors include soil types. Traffic load includes some function of traffic frequency and the weight of the vehicles.

There are also combined effects between these two main factors. Heavy and frequent traffic loadings while the pavement is more vulnerable due to severe weather will cause more damage than the same loadings during favorable weather. In addition, several other factors can contribute to the rate at which



pavement deteriorates. These include:

- Type, condition, and moisture content of the sub grade soil,
- Type, thickness, and strength of the base materials,
- Timing of preventive maintenance fixes, and
- Quality of construction.

According to the American Association of State Highway and Transportation Officials (AASHTO): “Those who work with pavements know that after a pavement is built, traffic and environmental loadings create unavoidable stress that will eventually reduce the condition of the roads to a point where they will not be usable without maintenance. They also know that early treatment will extend the life of some pavement.”<sup>1</sup>

Preventive maintenance programs are designed to extend the life of good pavements by applying low cost, short term treatments. Preventive maintenance projects are low cost projects intended to protect an existing pavement structure, slow the rate of pavement deterioration, and/or correct overall deficiencies in the pavement surface. The benefit of preventive maintenance activity can best be realized if an agency applies treatments to a pavement in good condition. Preventive maintenance treatments cannot be targeted to the worst roads, but must be made to those in fair or good condition which have defects that if left unattended would require much more costly repairs.

The challenge for most agencies is to determine when in the life of a pavement is the best time to apply a preventive maintenance treatment for the maximum benefit. Preventive maintenance is perhaps the single most influential component in the network strategy, which allows an agency to manage pavement conditions. It creates the ability to postpone costly reconstruction or rehabilitation activities, by extending the remaining service life of the original pavement.

A significant benefit of a comprehensive preventive maintenance program is that it gives managers control over future network conditions and funding requirements. By controlling future network conditions, decision makers can anticipate routine maintenance work loads, safety deficiencies, and ride quality needs. Several studies have found that a dollar invested in preventive maintenance will save from \$4 to \$6 in future reconstruction or rehabilitation costs. On the other hand, a Federal Highway Administration study found that if you defer preservation for even one year, a road can lose 5 to 6 years of its useful remaining service life.<sup>2</sup>

---

<sup>1</sup> Executive Summary Report: Pavement Management Guide,” AASHTO, November 2001, pp. 1-2.

<sup>2</sup> Cited in “Pavement Preservation: Applied Asset Management,” National Center for Pavement Preservation, Department of Civil Engineering, Michigan State University, December 2004.



## **ASSET MANAGEMENT TOOLS FOR ROADS**

### **Overview of PASER**

At the State of Michigan level, all federal-aid-eligible roads (normally major streets and highways) were evaluated on their condition. In 2003, a compilation of all of the State's Federal-aid-eligible road conditions was achieved for the first time. In order to achieve the legislative mandate outlined in PA 499, the State's Asset Management Council adopted the PASER windshield rating system. There are other systems that you will frequently hear about which measure ride quality, more detailed surface condition, pavement rutting, and other deterioration criteria.

For the City of Ionia, all roadways were evaluated using the PASER system in 2004 and again in 2005. The data was incorporated into the RoadSOFT pavement management collection system and complimented other data that had been kept in paper formats by various city departments. All of the data was subsequently transferred into the City's Geographic Information Systems and now includes water, sanitary sewer, storm sewer, and road conditions. While only federal-aid-eligible data is required for reporting, all roads are now regularly evaluated along with the underlying infrastructure. When the rebuild of the city system is complete, even more detailed data will be available for analysis purposes.

The Pavement Surface Evaluation and Rating System (PASER) is a visual survey which rates the condition of various types of pavement distress on a scale of 1-10. It is based on a system of pavement evaluation developed in Wisconsin and is used by most road agencies in that state.

The Transportation Information Center, University of Wisconsin-Madison has put together a series of manuals associated with ratings for different types of surfaces. The manuals are "designed to provide background information on asphalt [or concrete, gravel, brick, etc.] pavement conditions and causes of distress as well as a simple procedure to rate pavement condition."<sup>2</sup>

PASER is the rating method used by RoadSoft which is the predominant pavement management software in use throughout Michigan. The Council chose to rate Michigan's roads using the PASER rating method. The City of Ionia has used and is using RoadSoft as its software. Our detailed reports generated from RoadSOFT have helped us in compiling our yearly work programs and are found in the Appendix section of this report.



<sup>2</sup> **Asphalt – PASER Manual**, Transportation Information Center, University of Wisconsin-Madison, November 1996

As mentioned, PASER is a visual, windshield survey. This type of survey is one of the easiest to do and is relatively inexpensive compared to other rating methods. This makes it ideal for small agencies.

### **AASHTO GUIDELINES**

The American Association of State Highway & Transportation Officials (AASHTO) identifies four methods for determining pavement condition.

**Surface Distress**: damage to the pavement surface. Distress surveys are performed to determine the type, severity, and quantity of surface observable distress.

**Structural Capacity**: the maximum load and number of repetitions a pavement is predicted to carry. Structural analysis is normally conducted to determine the current pavement load-carrying capacity which can be compared to the capacity needed to accommodate projected traffic.

**Roughness (ride quality)**: a measure of pavement surface distortion or an estimate of the ability of the pavement to provide a comfortable ride to the users.

**Surface Friction or Skid Resistance**: the ability of the pavement surface to provide sufficient friction to avoid skid-related safety problems, especially in wet weather.

The first two measures are generally considered measures of the engineering properties of the pavement while the last two are generally considered measures of the functional performance of the pavement.

Source: “Executive Summary Report: Pavement Management Guide,” AASHTO, November 2001, p. 7.

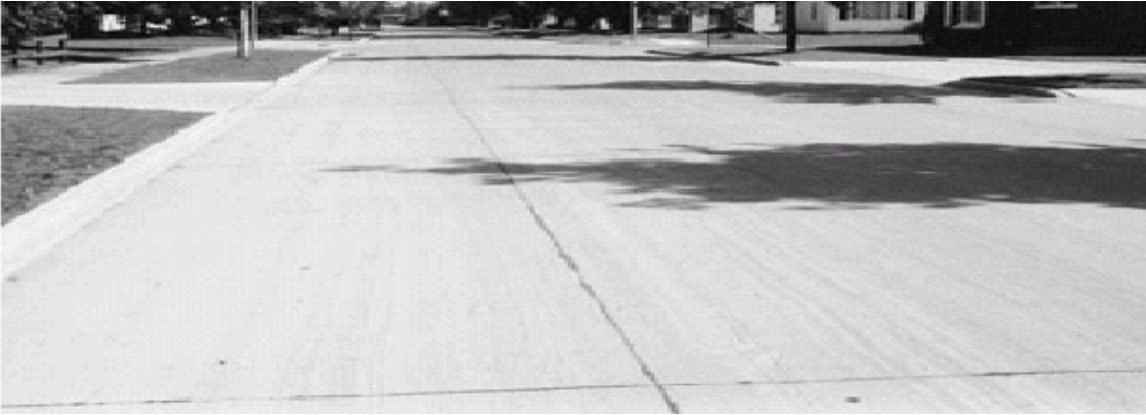
While PASER is a subjective method it is based on sound engineering principles. PASER measures “surface distress.” It does not measure structural capacity, ride quality or friction. [See accompanying text box]

PASER uses 10 separate ratings. There are different ratings for different surfaces based on the types of deterioration that is evident. [The Appendix contains photos from the various PASER manuals for all ratings for asphalt, concrete, and gravel surfaces.] For the Council’s and City of Ionia’s purposes these ratings have been grouped into three work-related improvement categories.

### **Routine Maintenance**

Routine maintenance is the day-to-day regularly-scheduled activities such as street sweeping, drainage clearing, gravel shoulder grading and sealing cracks to prevent water from seeping into the surface. PASER ratings 8, 9, 10 are included in this category. The following pictures show the types of roads that require routine maintenance. This category includes roads that are newly constructed or recently seal-coated. They require little or no maintenance. All cracks are sealed tightly.





### **Capital Preventive Maintenance**

Capital preventive maintenance is at the heart of asset management. It is the planned set of cost effective treatments to an existing roadway that retards further deterioration and maintains or improves the functional condition of the system without significantly increasing the structural capacity. The purpose of capital preventive maintenance fixes is to protect the pavement structure, slow the rate of deterioration, and/or correct pavement surface deficiencies. CPM is intended to address pavement problems before the structural integrity of the pavement has been severely impacted. PASER ratings 5, 6, and 7 are included in this category.



In the following pictures we are beginning to see the first signs of wear. The roads still show good structural support but the surface is starting to deteriorate requiring more extensive crack filling or sealcoating. Longitudinal cracks or moderate flushing may be occurring. Transverse cracks and block cracking are becoming evident. There may be the start of some spalling along joint edges. The City of Ionia has made a decision to not use sealcoating because of the associated costs of removing leftover materials (stone used in the process that must be cleaned from the road and catch basins and then landfilled). Instead, we have adopted a policy of mill and capping the roadway which provides a longer fix and is as cost effective. In addition, we have also gone to a yearly crack sealing program process.



### **Structural Improvement**

Roads rated 1, 2, 3, or 4 are in need of some type of structural improvement such as resurfacing or major reconstruction. Rutting is beginning to take place. Large patches are required. Alligator cracking is evident. Joints and cracks are badly spalled. There are broken slabs requiring complete rebuilding. The following pictures show roads with these types of problems.





For a more extensive view of the types of distresses associated with each PASER rating see the Appendix.



## **IONIA ASSET MANAGEMENT**

### **2004 Highlights**

Based on the statements, strategies and objectives outlined in the 2004 Asset Management Program, the City of Ionia has undertaken and completed the following during 2004:

#### **Total System Actions**

1. Rebuilt West Washington Street from M-66 (Dexter) to Yeomans Street. The work included replacement of the sanitary sewer lines that were constructed prior to 1923; replacement of the storm sewer system that was wholly inadequate to provide drainage and was probably built when the road was first hard-surfaced on or about 1928; replacement of all curb and gutter, replacement of the water system which was constructed of cast iron main and galvanized water services in 1927; and replacement of the road base, grade, and surface with a new bituminous construction. The former road was deteriorating concrete that was overlaid with bituminous material.
2. Rebuilt Rice Street from Yeomans Street to M-21 (Lincoln Avenue). The work included replacement of the sanitary sewer lines that collect not just the Rice Street area but also sanitary waste generated and transported from Easton Township on the way to the Publicly Owned Treatment Works (POTW); replacement and upgrade of the storm sewer system that was installed beginning in 1928 with further work documented in 1965; replacement of all curb and gutter that had been hand-produced in the 1940's, replacement and upgrade of the potable water system which was 4 and 6 inches of cast iron installed in the 1940's; and replacement of the road base, grade, and surface with new bituminous material.
3. Rebuilt and upgraded West Main Street from M-66 (Dexter Street) to the West City Limits near Vanderheyden Court in Easton Township. The rebuild included replacement and correction of sanitary sewer in and around the Yeomans Street intersection. This sanitary sewer collects waste from Ionia City to the east and west (on Main) as well as Easton Township on Yeomans Street. Just prior to construction starting, the main sanitary line leading from this point to the POTW collapsed. Indications were that during flooding in the spring of 2004, the manholes that were interspersed on this line captured groundwater due to the lack of bottoms in such hand-laid brick structures. The water included sand and bedding material which was noted at the POTW. When the water receded, the structures collapsed because of the undermining that had taken place. This entire section was replaced as were all manholes with proper fall that corrected flooding in basements along Main Street. The road service was then reconstructed of new bituminous material and it will serve as a major bypass for MDOT during 2005 when M-21 is reconstructed.
4. Rebuild of Jackson Street from Adams Street to the south terminus. The work included replacement of sanitary sewer, replacement and upsizing of the water main which was 6 inch cast iron with 12 inch ductile transmission main. This formed the basis for a "south loop" of large-diameter main that equalizes



pressure in the low-zone of the City. The road base consisted of muck, railroad cinders, and other material that was excavated, geo-fabric installed, a new base constructed. The road surface was thickened to reflect traffic from Public Safety, Public Transportation, and Public Works that are located along the road with new bituminous. The road was constructed in the 1930's as were all utilities.

5. Rebuild of Steele Street from Adams Street south to M-66 (Dexter Street). During this process, the 12-inch water main was connected at Railroad Street and then run west to Steele. The 12 inch main then was placed in Steele south from Steele and the former K-Mart Plaza to Brown Boulevard which completed the 12 inch "loop." The former water main on Steele was constructed in the 1940's and was an undersized 6 inch and 8 inch main with 4 inch galvanized existing under railroad tracks located on the north part of the project. The 12 inch also feeds the downtown business district and removes the 4 inch restrictions. The sanitary sewer, constructed in 1979, was upgraded by insulating laterals that froze due to shallow depths. Likewise, all water connections on the street south of Brown to Dexter were insulated (all are copper and were installed in 1979). This portion was 8 inches and was sized for business in the area. Curb and gutter was replaced in damaged portions and a new 6 inch bituminous road constructed from base that was determined to be in good condition.

6. Completion of the downtown parking lots and roadways. Main Street, Steele (between Washington and Adams), Depot, and Kidd Streets were all reconstructed during 2003 with new water mains, sanitary sewer, curb and gutter, storm sewer, and bituminous surfaces. During 2004, the adjoining parking areas (publicly owned) were reconstructed with underground power lines, new storm sewer collection system designed for run-off, and improvements to public lighting. The bituminous surface corrected drainage issues that included ponding. Landscaping was also installed to complete the parking projects.

### Other Asset Improvements

In addition to total system upgrades listed above, the following assets were improved during 2004:

1. The Public Transportation Building was upgraded utilizing federal designated earmarks. This work included an addition to the building that allowed buses to be stored under-roof; replacement of all roofs on the building that was constructed in 1989 and included elimination of all canvas awnings (replacing with hard-surfaces); upgrade of all HVAC; upgrade of all electrical to current code; painting of all interiors; and replacement of the parking lot bituminous surfaces. Incorporated into this work was compliance work necessary to fully comply with ADA that involved the dispatching area of the building as well as customer service windows. Cost of the project was \$320,000.

2. Completion of the expansion of the Department of Public Works Building. This \$225,000 project added training rooms, break rooms, and locker facilities as well as office space that was compliant with ADA. The wiring was upgraded on the building and HVAC installed, replacing older boilers that were installed in 1981 and that were severely undersized. No air handling system



existed in the building. Foundation issues were corrected during the addition construction and a new parking surface installed along with storm-water collection.

3. Controls were replaced in the Wellfield with new wireless computerized systems. This allowed all water tanks, pumps, and buildings to be monitored from a PC computer at the POTW. The new system replaced one that dated from the 1980's and offered no ability to upgrade. All buildings, tanks, and other fixed features had alarms incorporated into the replacement process for Homeland Security issues that were identified by the City's planning team. Approximately \$35,000 was spent on this radio read system that was connected to the existing SCADA system installed two years ago.

4. Well number 14 was replaced with well 14A. The former well required extensive maintenance to continue to produce 400 gallons per minute and also pumped sand when it dropped in efficiency. The new well pumps more than 750 gallons per minute and has not shown any of the former well's tendencies. It increases the "firm capacity" of the water delivery system and is connected to back-up power for emergencies. The total price of \$225,000 did not include an additional \$98,600 that was spent to drill a test well down below the existing, known aquifer to a depth nearing 500 feet. The purpose was to determine if long-range plans could include other aquifer areas in the existing production zone.

5. Completion of the City's Wellhead Protection Program. The program identifies the protection area for the City's water system and the resulting product was chosen as "Best of Class" by the American Water Works Association (AWWA) and will be honored as the top program in the country during the spring of 2005. The overall program included state grants as well as city funds and totaled \$320,000.

6. Rebuilding of the Sanitary Sewer Collection Lift Station at Wall Street and Main Street. This collection lift station collects waste from 12 homes in the area and lifts the product to a main transmission line connecting the State Institutions to the POTW on Main Street just east of Wall Street. The rebuild included all controls, piping, and interior tanks and cost \$11,000.

7. First phase of construction of a new communication system that will allow interoperability of all city departments, connecting in the future to all county agencies, and linking the complete system to the State of Michigan's 800 MHz radio system. The first phase involved \$300,000 to construct a 320 foot communication tower, installing Automatic Vehicle Locator systems on the Public Transportation fleet and linking to their dispatch (with 2005 showing the system expanded to Public Works and Public Safety), installing a new 800 MHz radio system for Public Transportation that included base radios, portable radios and vehicle radios, construction of a communication building to house the new system, and installation of computerized dispatch at Public Transportation. Radios were also ordered for Administration (City Hall and Recreation), Public Safety (police and fire), Public Works, and Public Utilities on the 800 MHz system. The 2005 and beyond work program incorporates additional work.

8. Mapping on the City Geographic Information System of all improvements, all dating of existing systems, locations of all signs and street lights and approximately 2/3 of the City's trees. The second round of evaluating the City's complete Street System was completed with the results contained in



this report. Work began on rating all roads in the City's park systems (including the fairgrounds) as well as all city sidewalks.

### **2005-2010 Work Program**

Using the Goal Statement and objectives, the Ionia City Council then developed a comprehensive work program to cover activities over the next several years. The work program is anticipated to expand as more City Infrastructure is evaluated and incorporated in the Asset Management System.

#### **Training**

1. For 2005, complete training of all DPW and DPU staff on the reasons, principles and outcomes of Asset Management utilizing all available Local, State, and National resources. More than half of all members have been trained to date; in 2005 we will complete education of all remaining members. Also incorporated will be Accreditation by the APWA which ensures policies and procedures of all of the city's programs are documented and coordinated.
2. For 2006 through 2010, achieve the accreditation of APWA for DPU, DPW, Building Inspection, and Public Transit.
2. For 2005, Training of all employees in issues of Homeland Security including a basic understanding of CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosives), Unified Incident Command for use on not only emergency events but day-to-day situations, use of the 800 MHz radio communication system, and refresher courses on subjects such as NIMS (National Incident Management System). For outlying years, refresher courses on a regular basis.

#### **Total Improvements**

1. Utilizing a \$5.6 million bond issue that will be sold in May of 2005, the following total improvement process shall be undertaken:

##### **2005**

a. Rebuilding of East Washington Street from Jefferson to the east City Limits at Lovell Street. The work will include replacing the potable water lines that are undersized and installed in 1938; replacement of the sanitary sewer system that was installed in 1938; replacement of the Storm Sewer System that was constructed in 1938 and does not meet demand; replacement of all curb and gutter along with road base and construction of a new bituminous base and surface. Major Street.

b. Rebuilding of Morse Street from East Washington to M-21 (Lincoln Avenue). The work includes replacing the potable water lines (installed beginning in 1938; replacement of the sanitary sewer system that was installed in 1938; replacement of the Storm Sewer system that was constructed in 1938 and replacement of all curb and gutter. The road base includes considerable clay base and all will be excavated and properly built with new bituminous surface. Major Street.

c. Rebuilding of M-21 (Lincoln Avenue) from M-66 (Dexter Street) to the West City Limits. Working in conjunction with MDOT, the City will be replacing



all water, storm and sanitary sewers, all property connections, and making connections for additional work on M-66 during 2006. The city's portion is \$315,000 with the total project exceeding \$1 million and involves replacement of the roadway as well as curb and gutters. The initial infrastructure was constructed in the 1920's.

d. Rebuilding of High Street from M-66 (Dexter Street) to High Street. The project involves considerable retaining wall work caused by the nearly 60 feet of elevation change that occurs in the area. Work includes replacement of the potable water system, sanitary and storm sewers, curb and gutter, and road base. The original utilities were placed in the late 1920's through early 1930's (stopped at one point by the depression but later continued under work programs). The new roadway will be constructed of 6 inches of bituminous which is heavier than our standard for local roadways but deemed necessary because of school traffic that utilizes High Street for both the Ionia Middle School as well as SS. Peter and Paul elementary.

e. Rebuilding of Baldie Street from High Street to M-21 (Lincoln Avenue). The work involves construction of retaining walls, new potable water mains, sanitary and storm sewers, and curb and gutter. The roadway will be regraded with changes made to accommodate better stormwater run-off and collection. The original infrastructure was built in the 1930's

f. Milling, evaluation of base, and resurfacing of Skyview Drive, Southview Drive, Melody Drive, and Highland Drive in the Fran-Mar subdivision. The work also involves extending sanitary sewer and potable water connections to the last commercial lot along M-21 at Skyview Drive. All underlying infrastructure was constructed in 1971 but curb and gutter may have to be repaired in sections that have been damaged by snow removal.

g. Milling, evaluation of base, and resurfacing of Ridgewood Drive, Ridgewood Court and Oakwood Court. All underlying infrastructure was constructed from 1975 to 1990 and is in excellent condition.

h. Rebuilding of Stevenson Street from East Washington Street to Lafayette Street. The work involves reconstruction of the storm sewer which will be relocated from private property easement into the roadway right of way, taking advantage of East Washington Reconstruction. Curb and gutter will be added and a new bituminous surface installed. All underlying utilities have been installed since 1970.

i. Evaluation of Lovell Street and East Washington intersection. When the road surface is removed, the intersection will be investigated to determine conditions of utilities and infrastructure for planning for 2006. The same will take place at East Washington and Oak Street where no good records exist to infrastructure.

j. Rebuilding Railroad Street between Jackson Street and Jefferson Streets. The potable water main that was installed sometime prior to 1930 and that is made of 4 inch galvanized pipe will be replaced with a 12 inch main that will connect two low-zone districts. There is no sanitary sewer on the street. The road base that consists of cinders and other fill material will be removed with new base and 6 inch bituminous surface constructed.

k. Rebuilding Cyrus Street from M-21 (Lincoln Avenue) north to the City Limits at North Street. If federal funds are not approved for this project, it will be stopped at the city limits located at Fargo Street, omitting two blocks of the project. The existing water, sanitary and storm sewers that were installed in



1943 will be removed and replaced with new. The curb and gutter installed in 1948 will be removed, regraded to facilitate run-off and collection and a new bituminous road constructed with upgraded base material. All gas lines will be replaced by Consumer's Power as part of the project.

2006

a. Rebuilding of Center Street from High Street to M-21 (Lincoln Avenue). The existing water, sanitary and storm sewers that were installed in 1943 will be removed and replaced with new. The curb and gutter installed in 1948 will be removed, regraded to facilitate run-off and collection and a new bituminous road constructed with upgraded base material. All gas lines will be replaced by Consumer's Power as part of the project.

b. Rebuilding of Pleasant Street from High Street to M-21 (Lincoln Avenue). The existing water, sanitary and storm sewers that were installed in 1943 will be removed and replaced with new. The curb and gutter installed in 1948 will be removed, regraded to facilitate run-off and collection and a new bituminous road constructed with upgraded base material. All gas lines will be replaced by Consumer's Power as part of the project.

c. Rebuilding of Summit Street from Rich Street to Pleasant Street. The existing water, sanitary and storm sewers that were installed in 1943 will be removed and replaced with new. The curb and gutter installed in 1948 will be removed, regraded to facilitate run-off and collection and a new bituminous road constructed with upgraded base material. All gas lines will be replaced by Consumer's Power as part of the project.

d. Rebuilding of Tower Street from Union Street to Pleasant Street. The existing water, sanitary and storm sewers that were installed in 1943 will be removed and replaced with new. The curb and gutter installed in 1948 will be removed, regraded to facilitate run-off and collection and a new bituminous road constructed with upgraded base material. All gas lines will be replaced by Consumer's Power as part of the project.

e. Rebuilding of Stevens Street from Baldie Street to Center Street. The existing water, sanitary and storm sewers that were installed in 1943 will be removed and replaced with new. Curb and gutter will be installed (where none now exists) to facilitate run-off and collection and a new bituminous road constructed with upgraded base material. All gas lines will be replaced by Consumer's Power as part of the project.

f. Completion of Lovell Street between M-21 (Lincoln Avenue) and East Washington. The existing water, sanitary and storm sewers that were installed in 1953 will be removed and replaced with new. Curb and gutter will be installed (where none now exists) to facilitate run-off and collection and a new bituminous road constructed with upgraded base material. All gas lines will be replaced by Consumer's Power as part of the project.

g. Completion of Oak Street from East Washington south to its terminus. The existing water, sanitary and storm sewers that were installed at some point (but not recorded) will be removed and replaced with new. Curb and gutter to facilitate run-off and collection and a new bituminous road will be constructed with upgraded base material. All gas lines will be replaced by Consumer's Power as part of the project.



2007

a. Utilizing ongoing video investigation efforts, determinations of road projects for 2007, 2008, 2009, and 2010 will be finalized. Work that is being investigated: Hackett Street from Harter Street to the west City Limits at Nicholson Street; State Street from M-21 (Lincoln Avenue) to its terminus south of Hackett Street; Harter Street from M-21 (Lincoln Avenue) to High Street; Kimball Alley between High Street and West Main Street; Yeomans Street from West Main Street to the West City Limits; Roselawn Drive between Fargo Street and Forest Street; Johnson Street between Lafayette Street and Prospect Street; Allen Street; Jackson Street from north of M-21 (Lincoln Avenue) north to Fargo; Brown Street; Harrison Street; Bayard Street; and Lafayette Street. All or portions of utilities in these areas may require replacement or work.

b. Also to be resurfaced (involving mill and cap) will be: Hall Street, Prospect Street, Rich Street, Jackson Street between Main Street and Washington Street, Lytle Street, Townsend Street, Union Street from M-21 (Lincoln Avenue) north to Fargo Street; and Fargo Street from Union to Jefferson Streets.

2008

a. Grinding the surface and joint repairs on Dye Street from High Street to West Washington and Union Street from Summit Street to East Washington (both concrete roadways at substantial grades).

With these projects, all streets will have been reconstructed and all infrastructure would be 50 years or less in age.

#### Other Infrastructure

1. The following is a list of other improvements to the Total Asset Strategy that will be made in the listed years:

#### Public Transit

- a. Replacement of three buses in 2005
- b. Replacement of three buses in 2006
- c. Completion of the communication system interface with the State of Michigan 800 MHz system. The work, to be funded through federal grants, city funds, and homeland security, will involve installation of equipment necessary to connect and upgrade the State's 800 MHz system. It involves four frequencies with a fifth for data transmission along with associated hardware, computer programs and other necessary work. The work is planned for 2005 but may run into 2006 depending on delivery. It continues the work done in the city work plan for 2004 and can be expanded to all of Ionia County in the future (Belding will be linking in 2006).

#### Public Works

- a. Replacement of the high-ranger truck for trimming trees in 2005.
- b. Replacement of two pick-up trucks in 2005.
- c. Replacement of one dump truck in 2005 for street maintenance.



- d. Replacement of two dump trucks in 2006 which completes that portion of fleet replacement.
- e. Replacement of the John Deere backhoe in 2008.
- f. Replacement of the Michigan Front-end loader in 2009.
- g. Replacement of the Street Sweeper in 2010.

#### Public Utilities

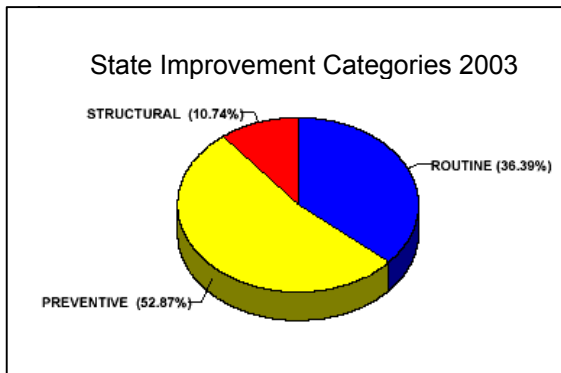
- a. Strip, inspect, and repaint the 1980 elevated 500,000 gallon water storage tank at Cyrus Street. This work to be completed in 2005.
- b. Inspect and repair as necessary the inground tanks at Cyrus Street: 1 million and 500,000 gallons in 2006.
- c. Inspect and repair as necessary the elevated storage tanks at Riverside Correctional and Handlon Training Unit in 2007.
- d. Remove, inspect, and upgrade two water wells in each of 2005, 2006, 2007, and 2008.
- e. Acquire property for Well Number 17 in 2005 (10 acres).
- f. Install back-up power devices on Well 16 and for future 17 in 2007 along with control house and appurtenances.
- g. Reconstruct the Sanitary Sewer main from M-21 (Lincoln Avenue) and M-66 intersection south to High Street. The work, to be done in conjunction with future growth project north of the City in a P.A. 425 area known as "Reisbigs Property" will replace a 6 inch collection main that runs under M-66. The new main will be 12 inches in size and will run in the stormwater easement. It will be constructed in 2005-2006.
- h. Reconstruct the Sanitary Sewer main from Jefferson and North Street south to Fargo; east on Fargo to an easement that runs south to Jackson and M-21 (Lincoln Avenue). This work, to be the second phase of the Reisbig property but constructed no later than fall of 2008, will upgrade an existing 12 inch clay line.
- i. Reconstruct the Sanitary Sewer collection main that runs in easements between Rich Street and Division Streets. This main would require lining with plastic material and begins near Fargo Street and runs south to M-21 at Division Street.
- j. Reconstruct the Sanitary Sewer and Storm Sewer collection main from M-21 (Lincoln Avenue) south to Lafayette Street). This work is dependent on coordination with the State MDOT. The current manholes and connections would be relocated east of their present location so that the main could be moved to the property line. It currently runs under a drive and garage that was constructed some time after the main was placed. The state is anticipating work in this area during 2008.



## **COMPARATIVE RESULTS**

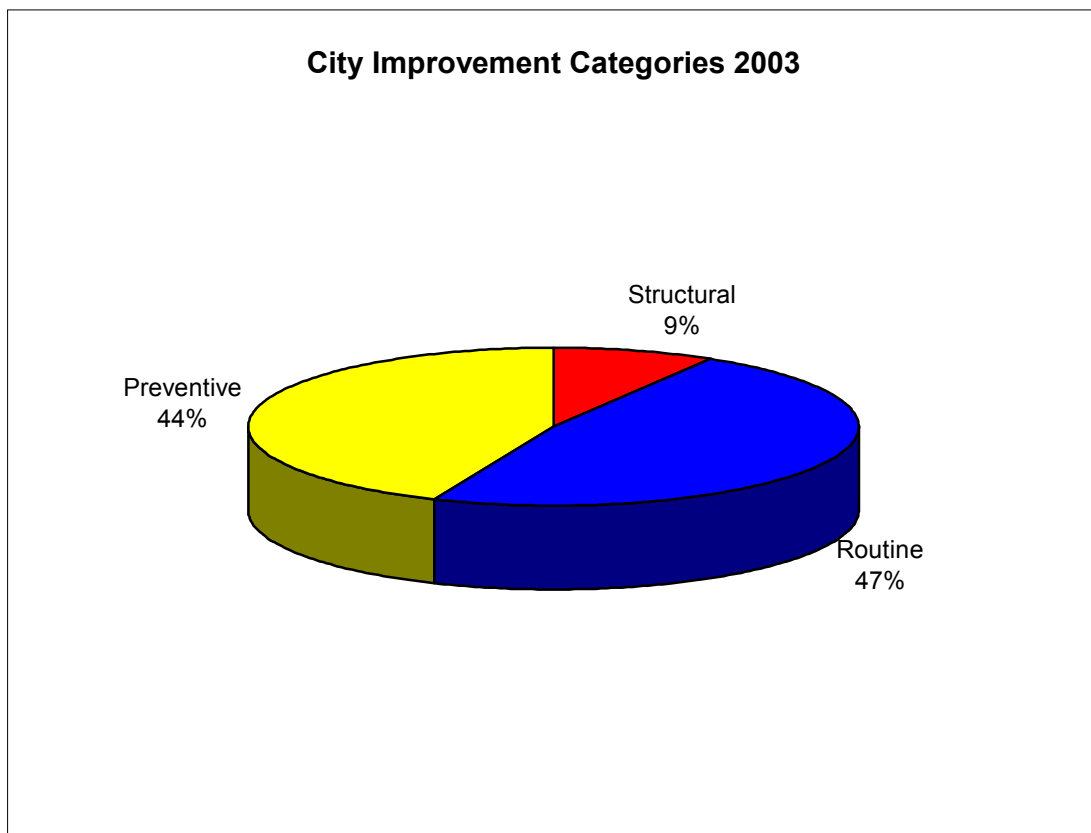
### **2003 AND 2004**

In Ionia, our Information Technology and Department of Public Works employees traveled all roads within the Corporate City limits and assigned ratings. This was done in addition to the state-rating of all of our major street. System.

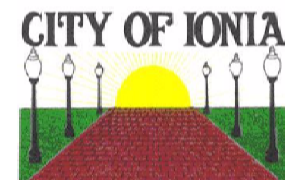


For 2003, the largest group needing structural improvement was collectors with 7,143 lane miles falling into this category. On the other hand, the smallest group was the freeways with only 386 lane miles needing structural improvement. The graph on the left shows these breakdowns from the state findings.

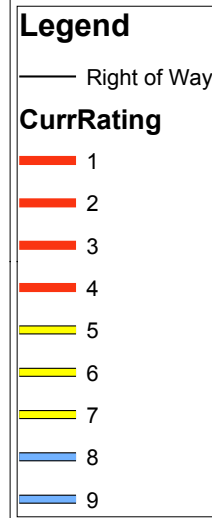
The City of Ionia closely mirrored the percentages found at the state level with major streets being in good condition; local streets being the ones needing most structural improvement. Maps of the condition of all streets in the City are found in the Appendix section of this document.





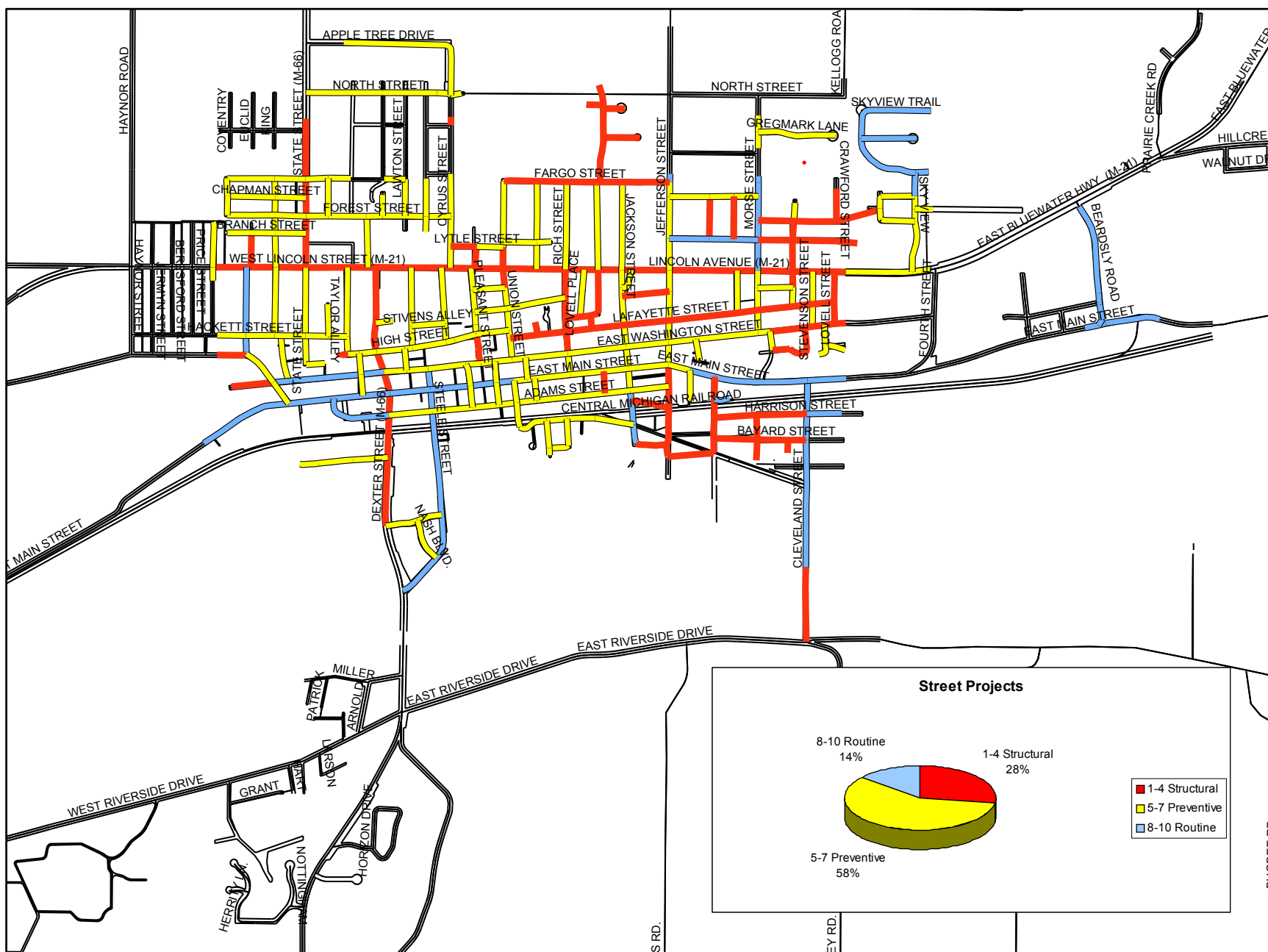


## 2005 Street Ratings



0.1 0.05 0 0.1 Miles

1 inch equals 0.40 miles





# Detailed Road and Segment Report

Report Module: Inventory Analysis

Today's Date: Thursday, 24 March 2005

## Report Filters

<u>Field Name</u>	<u>Operator</u>	<u>Value</u>
Ownership	=	Ionia



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Type Left	Right	C&G
0504901	E Adams St																						
YLR:	W Adams St	Dexter	Steele	Asp	0.000	0.124	0.124	40860		4	17	2	25	0	0	0	0	0	0	0	0	0	3
	water ponds in drive to Burger King off Adams Street																						
YLR:	W Adams St	Steele	Depot	Asp	0.124	0.240	0.116	40860		4	17	3	37	0	0	0	0	0	0	0	0	0	3
YLR:	W Adams St	Depot	Kidd	Asp	0.240	0.316	0.076	40860		4	17	3	35	0	0	0	0	0	0	0	0	0	3
YLR:	W Adams St	Kidd	Hudson	Asp	0.316	0.366	0.050	40860		4	17	3	35	0	0	0	0	0	0	0	0	0	3
YLR:	E Adams St	Hudson	Church	Asp	0.366	0.424	0.058	40860		4	17	3	34	0	0	0	0	0	0	0	0	0	3
YLR:	E Adams St	Church	Ellis	Asp	0.424	0.619	0.195	40860		4	17	2	36	0	0	0	0	0	0	0	0	0	3
YLR:	E Adams St	Ellis	Jackson	Asp	0.619	0.691	0.072	40860		4	17	2	39	0	0	0	0	0	0	0	0	0	3
YLR:	E Adams St	Jackson	Jefferson	Asp	0.691	0.802	0.111	40860		5	19	2	40	0	0	0	0	0	0	0	0	0	3
	NEEDS CRACKSEALING																						
Total Mileage for Road:								0.802															
3340819	W Adams St																						
YLR:2001	W Adams St	Main	Dexter	Asp	0.000	0.194	0.194	40860		4	17	3	30	0	0	0	0	0	0	0	0	0	3
Total Mileage for Road:								0.194															
0510808	Allen St																						
YLR:	Allen St	Jefferson	Batson	Asp	0.000	0.114	0.114	40860		5	19	2	28	0	0	0	0	0	0	0	0	0	3
YLR:	Allen St	Batson	Bagley	Asp	0.114	0.183	0.069	40860		5	19	2	28	0	0	0	0	0	0	0	0	0	3
YLR:	Allen St	Bagley	Morse	Asp	0.183	0.253	0.070	40860		5	19	2	27	0	0	0	0	0	0	0	0	0	3
Total Mileage for Road:								0.253															
3340705	Amphlett Ter																						
YLR:	Amphlett Ter	High	Pleasant	Uncef	0.000	0.091	0.091	40860		9	0	0	0	0	0	0	0	0	0	0	0	0	0
	ptivate drive																						
Total Mileage for Road:								0.091															
3340817	Apple Tree Ln																						
YLR:	Apple Tree Ln	North		Asp	0.000	0.442	0.442	40860		5	19	2	37	0	0	0	0	0	0	0	0	0	3
	MILLED AND FILLED(BLACK TOPPED) 2004																						
	first small holding pond off M-66 on S. side----Tile coming from N. side being restricted by dirt and large weeds growing in front of it																						
Total Mileage for Road:								0.442															
0510809	Bagley St																						
YLR:	Bagley St	Jones	Allen	Asp	0.000	0.122	0.122	40860		5	19	2	20	0	0	0	0	0	0	0	0	0	0



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
Total Mileage for Road:									0.122														
0503604	Baldie St																						
YLR:	Baldie St	High	Stivens	Asp	0.000	0.064	0.064	40860		5	19	2	28	0	0	0	0	0	0	0	0	0	3
from: High to the N on E side of road (across from Church and school parking lot) water ponds from BLIND CHILD sign to drive to N.																							
322 Baldie water ponds and drains very slowly at basin at Stivens Alley																							
YLR:	Baldie St	Stivens	Lincoln	Asp	0.064	0.229	0.165	40860		5	19	2	26	0	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.229														
0510806	Batson Ct																						
YLR:	Batson Ct	Jones	Allen	Asp	0.000	0.121	0.121	40860		5	19	2	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.121														
3340832	Bayard St																						
YLR:	Bayard St	Mill	Brown	Asp	0.000	0.124	0.124	40860		5	19	2	25	0	0	0	0	0	0	0	0	0	0
valley gutter. W of Brown near vacant lot has standing water on roadway																							
YLR:	Bayard St	Brown	Silver	Asp	0.124	0.212	0.088	40860		5	19	2	0	0	0	0	0	0	0	0	0	0	0
some water stands on the sides especially on the south side of the road. House on NE Corner N side of road has standing water																							
YLR:	Bayard St	Silver	Cleveland	Asp	0.212	0.263	0.051	40860		5	19	2	25	0	0	0	0	3	3	1	1	0	0
YLR:	Bayard St	Cleveland		Undef	0.263	0.356	0.093	40860		5	19	0	0	0	0	0	0	0	0	0	0	0	0
nothing here																							
Total Mileage for Road:									0.356														
0510409	Beardsley Rd																						
YLR:	Beardsley Rd	Main	Beardsley/Main Cutoff	Asp	0.000	0.019	0.019	40860		2	17	3	33	0	0	0	0	0	0	0	0	0	3
YLR:	Beardsley Rd	Beardsley/Main Cutoff	City/Twp Line	Asp	0.019	0.061	0.042	40860		2	17	3	33	0	0	0	0	0	0	0	0	0	3
YLR:	Beardsley Rd	City/Twp Line	Washington	Asp	0.061	0.069	0.008	40860	UNK	2	17	3	33	0	0	0	0	0	0	0	0	0	3
YLR:	Beardsley Rd	Washington	City/Twp Line	Asp	0.069	0.095	0.026	40860		2	17	3	33	0	0	0	0	0	0	0	0	0	3
YLR:	Beardsley Rd	City/Twp Line	City/Twp Line	Asp	0.095	0.352	0.257	40860	UNK	2	17	3	33	0	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.352														
3340576	Beardsley/Main Cutoff																						
YLR:	Beardsley/Main Cutoff	Main	Beardsley	Undef	0.000	0.015	0.015	40860		9	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.015														



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	AADT Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
0510810	Benton Ct																						
YLR:	Benton Ct	Morse	Johnson	Asp	0.000	0.101	0.101	40860		5	19	2	18	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:								0.101															
3340708	Blanchard Ct																						
YLR:	Blanchard Ct	Mill		Asp	0.000	0.044	0.044	40860		9	0	2	16	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:								0.044															
3340117	Bliss St																						
YLR:	Bliss St	Jackson	Jefferson	Asp	0.000	0.136	0.136	40860		5	19	2	24	0	0	0	0	0	0	0	0	0	3
Total Mileage for Road:								0.136															
0503406	E Bluewater Hwy																						
YLR:	W Lincoln Ave	City/Twp Line	City/Twp Line	Undef	3.923	4.258	0.335	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	City/Twp Line	Wall	Undef	4.384	4.606	0.222	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Nicholson	Rice	Asp	5.499	5.595	0.096	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Rice	Brooks	Asp	5.595	5.607	0.012	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Brooks	King	Asp	5.607	5.678	0.071	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	King	State	Asp	5.678	5.763	0.085	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	State	Harter	Asp	5.763	5.882	0.119	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Harter	Hall	Comp	5.882	5.941	0.059	40860		1	16	0	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Hall	Dexter	Asp	5.941	5.963	0.022	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Dexter	Baldie	Asp	5.963	6.064	0.101	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Baldie	Center	Asp	6.064	6.149	0.085	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Center	Cyrus	Asp	6.149	6.175	0.026	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Cyrus	Pleasant	Asp	6.175	6.234	0.059	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Pleasant	Pleasant	Asp	6.234	6.246	0.012	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Pleasant	Union	Asp	6.246	6.325	0.079	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Union	Townsend	Asp	6.325	6.421	0.096	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Lincoln Ave	Townsend		Asp	6.421	6.491	0.070	40860		1	16	3	0	0	0	0	0	0	0	0	0	0	0



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
	YLR:	E Lincoln Ave		Rich	Asp	6.491	6.503	0.012	40860	UNK	1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Rich	Lovell	Asp	6.503	6.556	0.053	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Lovell	Division	Asp	6.556	6.596	0.040	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Division	Jackson	Asp	6.596	6.663	0.067	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Jackson	Jackson	Asp	6.663	6.691	0.028	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Jackson	Jefferson	Asp	6.691	6.799	0.108	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Jefferson	Pearl	Asp	6.799	6.993	0.194	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Pearl	Morse	Asp	6.993	7.051	0.058	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Morse	Johnson	Asp	7.051	7.150	0.099	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Johnson	Stevenson	Asp	7.150	7.208	0.058	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Stevenson	Lovell	Asp	7.208	7.270	0.062	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Lovell	City/Twp Line	Asp	7.270	7.302	0.032	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	City/Twp Line	Sky View	Asp	7.302	7.491	0.189	40860	UNK	1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Lincoln Ave	Sky View	City/Twp Line	Asp	7.491	7.542	0.051	40860		1	16	3	0	0	0	0	0	0	0	0	0	0
	YLR:	E Bluewater Hwy	City/Twp Line	City/Twp Line	Undef	8.104	8.119	0.015	40860	UNK	1	16	0	0	0	0	0	0	0	0	0	0	0

Total Mileage for Road: 2.615

3340709 Bradford Ct

YLR:	Bradford Ct		High		Grav	0.000	0.027	0.027	40860		9	0	1	10	0	0	0	0	0	0	0	0
------	-------------	--	------	--	------	-------	-------	-------	-------	--	---	---	---	----	---	---	---	---	---	---	---	---

Total Mileage for Road: 0.027

0504104 Branch St

YLR:	Branch St		Brooks		Asp	0.000	0.068	0.068	40860		5	19	2	26	0	0	0	0	0	0	0	3
	NEEDS CRACKSEALING																					
YLR:	Branch St		Brooks	King	Asp	0.068	0.136	0.068	40860		5	19	2	26	0	0	0	0	0	0	0	3
	NEEDS CRACKSEALING																					
YLR:	Branch St		King	State	Asp	0.136	0.223	0.087	40860		5	19	2	26	0	0	0	0	0	0	0	3
	NEEDSCRAK SEALING																					

Total Mileage for Road: 0.223

3340710 Branch St



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
	YLR:	Branch St not here	Nicholson	Forest	Undef	0.173	0.226	0.053	40860		9	0	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.053														
0503508	Brooks Rd																						
	YLR:	Brooks Rd NEEDS CRACKSEALING	Lincoln	Branch	Asp	0.000	0.098	0.098	40860		5	19	0	0	0	0	0	0	0	0	0	0	0
	YLR:	Brooks Rd no street here just a right of way to a sewer main	Branch		Undef	0.098	0.111	0.013	40860		5	19	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.111														
3340820	Brown Blvd																						
	YLR:	Brown Blvd	Dexter	Nash	Asp	0.000	0.092	0.092	40860		5	19	3	38	0	0	0	0	0	0	0	0	3
	YLR:	Brown Blvd NEEEDS CRACKSEALING	Nash	Steele	Asp	0.092	0.163	0.071	40860		5	19	3	38	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.163														
0510607	Brown St																						
	YLR:	Brown St valley gutter			Asp	0.000	0.021	0.021	40860		9	0	2	24	0	0	0	0	0	0	0	0	0
	YLR:	Brown St valley gutter		Bayard	Asp	0.021	0.060	0.039	40860	UNK	5	19	2	24	0	0	0	0	0	0	0	0	0
	YLR:	Brown St	Bayard	Harrison	Asp	0.060	0.130	0.070	40860		5	19	2	24	0	0	0	0	0	0	0	0	0
	YLR:	Brown St	Harrison		Undef	0.130	0.163	0.033	40860		5	19	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.163														
0503605	Center St																						
	YLR:	Center St ROAD NEEDS BLACKTOPPING	High	Stivens	Asp	0.000	0.054	0.054	40860		5	19	2	26	0	0	0	0	0	0	0	0	3
	YLR:	Center St 416 Center water ponds at drive way to basin ROADS NEEDS BLACKTOPPING	Stivens	Lincoln	Asp	0.054	0.213	0.159	40860		5	19	2	26	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.213														
0504106	Chapman St																						
	YLR:	Chapman St curb pan dropped about two inches at the corner of chapman and kaiser NE corner NEEDS CRACK SEALING	Kaiser	King	Asp	0.000	0.136	0.136	40860		5	19	2	23	0	0	0	0	0	0	0	0	3
	YLR:	Chapman St NEEDS CRACKSEALING	King	State	Asp	0.136	0.223	0.087	40860		5	19	2	23	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.223														



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
3340714	Church Aly																						
YLR:	Church Aly	Adams	Main	Asp	0.000	0.063	0.063	40860			9	0	1	15	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.063														
0506409	Cleveland St																						
YLR:	Cleveland St	City/Twp Line	Bayard	Asp	0.213	0.576	0.363	40860	UNK	4	17	2	26	0	0	0	0	0	3	3	1	1	0
some water sits at the edge of the pavement from drive at dump towards N to 25 mph sign on E side of roadway. S. of drive fro rivertrail standing water between 2 street lights																							
YLR:	Cleveland St	Bayard	Harrison	Asp	0.576	0.651	0.075	40860		4	17	2	26	0	0	0	0	0	3	3	1	1	0
S. of Harrison on W side from City Street Light to power pole--standing water																							
YLR:	Cleveland St	Harrison	Main	Asp	0.651	0.746	0.095	40860		4	17	2	26	0	0	0	0	0	3	3	1	1	0
Total Mileage for Road:									0.533														
0510516	Colby St																						
YLR:	Colby St	Railroad	Colby	Asp	0.000	0.078	0.078	40860		5	19	2	20	0	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.078														
3340831	Colby St																						
YLR:	Colby St	Webber		Asp	0.000	0.020	0.020	40860		5	19	2	20	0	0	0	0	0	0	0	0	0	3
NEEDS CRACKSEALING																							
Total Mileage for Road:									0.020														
0510903	Crawford St																						
YLR:	Crawford St	Prospect		Asp	0.000	0.094	0.094	40860		5	19	2	19	0	0	0	0	0	0	0	0	0	0
valley gutter, hole at end of street that need fixing STREET NEEDS RESURFACING																							
Total Mileage for Road:									0.094														
0503606	Cyrus St																						
YLR:	Cyrus St	Lincoln	Lytle	Asp	0.000	0.062	0.062	40860		5	19	2	26	0	0	0	0	0	0	0	0	0	3
some of the curbs are poor																							
YLR:	Cyrus St	Lytle	Forest	Asp	0.062	0.148	0.086	40860		5	19	2	26	0	0	0	0	0	0	0	0	0	3
YLR:	Cyrus St	Forest	Fargo	Asp	0.148	0.268	0.120	40860		5	19	2	26	0	0	0	0	0	0	0	0	0	3
YLR:	Cyrus St	Vohler	City/Twp Line	Asp	0.407	0.431	0.024	40860		2	19	2	22	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.292														
0510706	Davis Ct																						
YLR:	Davis Ct	Lafayette		Asp	0.000	0.037	0.037	40860		5	19	2	14	0	0	0	0	0	0	0	0	0	0
valley gutter on some of the east side west side is partially a ditch that is lined with street brick approach is rfeally bad																							



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G	
Total Mileage for Road:									0.037															
3340034	N Depot St																							
YLR:		S Depot St	Adams	Main	Asp	0.000	0.062	0.062	40860		4	17	2	44	0	0	0	0	0	0	0	0	3	
YLR:		N Depot St	Main	Washington	Asp	0.062	0.126	0.064	40860		4	17	2	44	0	0	0	0	0	0	0	0	3	
Total Mileage for Road:									0.126															
3340830	DeQuack Aly																							
YLR:		DeQuack Aly not here	Railroad		Undef	0.000	0.045	0.045	40860		5	19	0	0	0	0	0	0	0	0	0	0	0	
Total Mileage for Road:									0.045															
3340718	Dexter Ct																							
YLR:		Dexter Ct	Dexter		Grav	0.000	0.048	0.048	40860		9	0	1	12	0	0	0	0	0	0	0	0	0	
Total Mileage for Road:									0.048															
0504502	N Dexter St																							
YLR:		S State Rd	City/Twp Line	City/Twp Line	Undef	13.061	13.098	0.037	40860	UNK	1	16	0	0	0	0	0	0	0	0	0	0	0	
YLR:		S State Rd	City/Twp Line	City/Twp Line	Undef	13.158	13.206	0.048	40860	UNK	1	16	0	0	0	0	0	0	0	0	0	0	0	
YLR:		S Dexter St		Steele	Undef	13.990	14.098	0.108	40860	UNK	1	16	0	0	0	0	0	0	0	0	0	0	0	
YLR:		S Dexter St	Steele	Brown	Undef	14.098	14.289	0.191	40860		1	16	0	0	0	0	0	0	0	0	0	0	0	
YLR:		S Dexter St	Brown	Wells	Asp	14.289	14.484	0.195	40860		1	16	0	0	0	0	0	0	0	0	0	0	0	
YLR:		S Dexter St	Wells	Adams	Asp	14.484	14.605	0.121	40860		1	16	2	0	0	0	0	0	0	0	0	0	0	
YLR:		S Dexter St	Adams	Main	Asp	14.605	14.667	0.062	40860		1	16	2	0	0	0	0	0	0	0	0	0	0	
YLR:		N Dexter St	Main	Washington	Asp	14.667	14.731	0.064	40860		1	16	2	0	0	0	0	0	0	0	0	0	0	
YLR:		N Dexter St	Washington	High	Asp	14.731	14.792	0.061	40860		1	16	2	0	0	0	0	0	0	0	0	0	0	
YLR:		N Dexter St	High	Dexter	Asp	14.792	14.876	0.084	40860		1	16	2	0	0	0	0	0	0	0	0	0	0	
YLR:		N Dexter St	Dexter Ct	Lincoln	Asp	14.876	15.034	0.158	40860		1	16	4	0	0	0	0	0	0	0	0	0	3	
Total Mileage for Road:									1.129															
0510710	N Dexter St																							
YLR:		W Fargo St	City/Twp Line	Lawton	Asp	0.011	0.072	0.061	40860	UNK	5	19	2	21	0	0	0	0	0	0	0	0	0	
In front of 449 W. Fargo, the whole length of the property water ponds in the roadway. Corner of Fargo and New North Dexter sand builds up from washing down from sand pit N by Fargo and Vohler's.																								



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
Total Mileage for Road:									0.061														
3340778	N Dexter St																						
YLR:	N Dexter St	Forest			Conc	0.000	0.061	0.061	40860		5	19	2	25	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.061														
0503703	Division St																						
YLR:	Division St	Division	Lincoln		Asp	0.000	0.124	0.124	40860		5	19	2	23	0	0	0	0	0	0	0	0	3
	NEEDS CRACKSEALING																						
YLR:	Division St	Lincoln	Fargo		Asp	0.124	0.374	0.250	40860		5	19	2	26	0	0	0	0	0	0	0	0	3
	could use crack seal?																						
Total Mileage for Road:									0.374														
0510703	Division St																						
YLR:	Terrace Ave	Rich	Lovell		Asp	0.000	0.042	0.042	40860		5	19	2	21	0	0	0	0	0	0	0	0	3
YLR:	Terrace Ave	Lovell	Division		Asp	0.042	0.073	0.031	40860		5	19	1	20	0	0	0	0	0	0	0	0	0
	valley gutter on south side NEEDS CRACKSEALING																						
YLR:	Division St	Division	Division		Asp	0.073	0.094	0.021	40860		5	19	2	24	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.094														
0510707	Division St																						
YLR:	Division St	Lafayette	Division		Asp	0.000	0.037	0.037	40860		5	19	2	18	0	0	0	0	0	0	0	0	3
	NEEDS CRACKSEALING																						
Total Mileage for Road:									0.037														
0510009	Dye St																						
YLR:	Dye St	Washington	High		Conc	0.000	0.061	0.061	40860		5	19	2	25	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.061														
3340719	Ellis Aly																						
YLR:	Ellis Aly	Adams	Main		Asp	0.000	0.063	0.063	40860		9	0	1	11	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.063														
0510701	E Fargo St																						
YLR:	E Fargo St	Union	Townsend		Asp	0.000	0.095	0.095	40860		5	19	2	23	0	0	0	0	0	0	0	0	0
	NEEDS CRACKSEALING																						
YLR:	E Fargo St	Townsend	Rich		Asp	0.095	0.179	0.084	40860		5	19	2	0	0	0	0	0	0	0	0	0	0
YLR:	E Fargo St	Rich	Division		Asp	0.179	0.265	0.086	40860		5	19	2	0	0	0	0	0	0	0	0	0	0
	Tile on S. side (Bob Bailey's) is half full of dirt. This is tile that runs under the road from N. side to S. side.																						
YLR:	E Fargo St	Division	Ridgewood		Asp	0.265	0.276	0.011	40860		5	19	2	23	0	0	0	0	0	0	0	0	0



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G	
	YLR:	E Fargo St	Ridgewood	Jackson	Asp	0.276	0.338	0.062	40860		5	19	2	22	0	0	0	0	0	0	0	0	0	
	YLR:	E Fargo St	Jackson	Jefferson	Asp	0.338	0.473	0.135	40860		5	19	2	21	0	0	0	0	0	0	0	0	0	
		340 E Fargo water ponds on edge of road from drive to drive.																						
		Between Jefferson and Jackson on S side Outlet for catch basin has debris and clumps of trees growing in front of it restricting flow of water for discharge.																						
		Total Mileage for Road:							0.473															
0504107	W Fargo St																							
	YLR:	W Fargo St	Kaiser	King	Asp	0.000	0.135	0.135	40860		5	19	2	21	0	0	0	0	0	0	0	0	0	
		NEEDS CRACKSEALING																						
	YLR:	W Fargo St	King	State	Asp	0.135	0.223	0.088	40860		5	19	2	21	0	0	0	0	0	0	0	0	3	
		NEEDS CRACKSEALING																						
	YLR:	W Fargo St	State	Roselawn	Asp	0.223	0.288	0.065	40860		5	19	2	24	0	0	0	0	0	0	0	0	0	
		NEEDS CRACKSEALING																						
	YLR:	W Fargo St	Roselawn		Asp	0.288	0.352	0.064	40860		5	19	2	24	0	0	0	0	0	0	0	0	0	
		NEEDS CRACKSEALING																						
		Total Mileage for Road:							0.352															
0510104	Forest Hill Ave																							
	YLR:	Forest Hill Ave	Park	Washington	Asp	0.000	0.053	0.053	40860		5	19	2	16	0	0	0	0	0	0	0	0	0	
		this section loops back, it doesn't continue to washington st. NEEEDS CRACKSEALING																						
		Total Mileage for Road:							0.053															
0504105	Forest St																							
	YLR:	Forest St	Kaiser	King	Asp	0.000	0.136	0.136	40860		5	19	2	23	0	0	0	0	0	0	0	0	3	
		where Forest and Kaizer dead end at arrow sign, water ponds at edge of roadway																						
	YLR:	Forest St	King	State	Asp	0.136	0.225	0.089	40860		5	19	2	23	0	0	0	0	0	0	0	0	3	
	YLR:	Forest St	State	Roselawn	Asp	0.225	0.288	0.063	40860		5	19	2	24	0	0	0	0	0	0	0	0	0	
		part of it is 37 ft wide																						
	YLR:	Forest St	Roselawn	Hall	Asp	0.288	0.397	0.109	40860		5	19	2	24	0	0	0	0	0	0	0	0	0	
		valley gutter, drainage on the south side is rather poor and starting to damage the road.																						
	YLR:	Forest St	Hall	Dexter	Asp	0.397	0.442	0.045	40860		5	19	2	0	0	0	0	0	0	0	0	0	0	
		W of Old Pump House water is washing away the shoulder on S side of road due to rains																						
	YLR:	Forest St	Dexter	Lawton	Asp	0.442	0.507	0.065	40860		5	19	2	23	0	0	0	0	0	0	0	0	0	
	YLR:	Forest St	Lawton	Louisa	Asp	0.507	0.567	0.060	40860		5	19	2	23	0	0	0	0	0	0	0	0	0	
	YLR:	Forest St	Louisa	Cyrus	Asp	0.567	0.638	0.071	40860		5	19	2	23	0	0	0	0	0	0	0	0	0	
		NW corner has standing water between basin and sidewalk. SW corner gutter pan won't allow water to run to basin																						



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
Total Mileage for Road:									0.638														
0510616	Garrity Aly																						
YLR:	Garrity Aly	Railroad			Undef	0.000	0.021	0.021	40860		5	19	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.021														
3340548	Gregmark Ln																						
YLR:	Gregmark Ln	Morse			Asp	0.000	0.223	0.223	40860		5	19	2	27	0	0	0	0	0	0	0	0	3
		needs further evaluation, poor initial construction																					
Total Mileage for Road:									0.223														
0509901	Hackett St																						
YLR:	Hackett St	City/Twp Line	Rice		Asp	0.244	0.325	0.081	40860	UNK	5	19	2	28	0	0	0	0	0	0	0	0	3
		NEEDS CRACKSEALING																					
YLR:	Hackett St	Rice	King		Asp	0.325	0.407	0.082	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
YLR:	Hackett St	King	King		Asp	0.407	0.425	0.018	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
YLR:	Hackett St	King	State		Asp	0.425	0.495	0.070	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
YLR:	Hackett St	State	Taylor		Asp	0.495	0.560	0.065	40860		5	19	2	34	0	0	0	0	0	0	0	0	3
YLR:	Hackett St	Taylor	Harter		Asp	0.560	0.613	0.053	40860		5	19	2	34	0	0	0	0	0	0	0	0	3
		NEEDS CRACKSEALING																					
Total Mileage for Road:									0.369														
0503602	Hall St																						
YLR:	Hall St	Lincoln	Forest		Asp	0.000	0.146	0.146	40860		5	19	2	25	0	0	0	0	0	0	0	0	0
		valley gutter NEEDS CRACKSEALING																					
Total Mileage for Road:									0.146														
0507403	Harrison St																						
YLR:	Harrison St	Mill	Brown		Asp	0.000	0.120	0.120	40860		5	19	2	24	0	0	0	0	0	0	0	0	0
		water sits on the road																					
YLR:	Harrison St	Brown	Cleveland		Asp	0.120	0.264	0.144	40860		5	19	2	0	0	0	0	0	0	0	0	0	0
		poor drainage even though the road is good. Between 554 & 606 on N. side standing water. From drive at 628 to drive at 630 on N sided standing water. House on NW Corner of Harrison & Cleveland from the drive on Harrison going W. almost to the property line has standing water.																					
YLR:	Harrison St	Cleveland			Asp	0.264	0.364	0.100	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.364														
0503601	Harter St																						
YLR:	Harter St	High	Hackett		Asp	0.000	0.051	0.051	40860		5	19	2	30	0	0	0	0	0	0	0	0	3



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	AADT Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
		NEEDS CRACKSEALING																					
YLR:		Harter St	Hackett	Lincoln	Asp	0.051	0.248	0.197	40860		5	19	2	30	0	0	0	0	0	0	0	0	3
		NEEDS CRACKSEALING																					
Total Mileage for Road:								0.248															
0506210	Harwood Rd																						
YLR:		Harwood Rd	City/Twp Line	Riverside	Undef	5.151	5.745	0.594	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:								0.594															
0504904	High St																						
YLR:		High St	Bradford	Kimball	Asp	0.000	0.033	0.033	40860		5	19	2	29	0	0	0	0	0	0	0	0	3
		water standing on the north side from the corner.																					
YLR:		High St	Kimball	Dexter	Asp	0.033	0.083	0.050	40860		5	19	2	29	0	0	0	0	0	0	0	0	3
		water collects in gutter pans especially lastdrive on the south side at 66.																					
YLR:		High St	Dexter	Dye	Asp	0.083	0.163	0.080	40860		5	19	2	33	0	0	0	0	0	0	0	0	3
YLR:		High St	Dye	Baldie	Asp	0.163	0.185	0.022	40860		5	19	2	27	0	0	0	0	0	0	0	0	3
YLR:		High St	Baldie	Center	Asp	0.185	0.283	0.098	40860		5	19	2	29	0	0	0	0	0	0	0	0	3
YLR:		High St	Center	Amphlett	Asp	0.283	0.307	0.024	40860		5	19	2	26	0	0	0	0	0	0	0	0	3
YLR:		High St	Amphlett	Pleasant	Asp	0.307	0.371	0.064	40860		5	19	2	34	0	0	0	0	0	0	0	0	3
YLR:		High St	Pleasant	Union	Asp	0.371	0.465	0.094	40860		5	19	2	33	0	0	0	0	0	0	0	0	3
Total Mileage for Road:								0.465															
0510906	Highland Dr																						
YLR:		Highland Dr	Melody	Sky View	Asp	0.000	0.096	0.096	40860		5	19	2	31	0	0	0	0	0	0	0	0	3
		STREET NEEDS RESURFACING																					
Total Mileage for Road:								0.096															
0510604	Hudson St																						
YLR:		Hudson St	Railroad	Adams	Asp	0.000	0.070	0.070	40860		5	19	2	23	0	0	0	0	0	0	0	0	3
		NEEDS CRACKSEALING																					
YLR:		Hudson St	Adams	Main	Asp	0.070	0.133	0.063	40860		4	17	2	40	0	0	0	0	0	0	0	0	3
		crack sealed 1999																					
Total Mileage for Road:								0.133															
3340118	Jackson St																						
YLR:		Jackson St	Jackson	Lincoln	Asp	0.000	0.063	0.063	40860		4	19	2	27	0	0	0	0	0	0	0	0	3
		NEEDS CRACKSEALING																					



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
Total Mileage for Road:									0.063														
0503704	N Jackson St																						
YLR:	S Jackson St	Webber	Railroad	Asp	0.000	0.054	0.054	40860	4	17	2	38	0	0	0	0	0	0	0	0	0	0	
NE Corner standing water on roadway																							
YLR:	S Jackson St	Railroad	Railroad	Asp	0.054	0.122	0.068	40860	4	17	2	30	0	0	0	0	0	0	0	0	0	0	
YLR:	S Jackson St	Railroad	Adams	Asp	0.122	0.151	0.029	40860	4	17	2	33	0	0	0	0	0	0	0	0	0	1	
YLR:	S Jackson St	Adams	Main	Asp	0.151	0.214	0.063	40860	4	17	2	33	0	0	0	0	0	0	0	0	0	3	
YLR:	N Jackson St	Main	Washington	Asp	0.214	0.277	0.063	40860	4	17	2	35	0	0	0	0	0	0	0	0	0	3	
YLR:	N Jackson St	Washington	Lafayette	Asp	0.277	0.339	0.062	40860	4	17	2	28	0	0	0	0	0	0	0	0	0	3	
YLR:	N Jackson St	Lafayette	Bliss	Asp	0.339	0.422	0.083	40860	4	17	2	27	0	0	0	0	0	0	0	0	0	3	
NEEDS CRACKSEALING																							
YLR:	N Jackson St	Bliss	Jackson	Asp	0.422	0.446	0.024	40860	4	17	2	27	0	0	0	0	0	0	0	0	0	3	
YLR:	N Jackson St	Jackson	Lincoln	Asp	0.446	0.497	0.051	40860	4	17	2	27	0	0	0	0	0	0	0	0	0	3	
NEEDS CRACKSEALING																							
YLR:	N Jackson St	Lincoln	Fargo	Asp	0.497	0.747	0.250	40860	5	19	2	26	0	0	0	0	0	0	0	0	0	3	
ROAD FAIR UP TO HOUSE # 617 THEN ROAD IS VARY POOR																							
Total Mileage for Road:									0.747														
0503706	N Jefferson St																						
YLR:	S Jefferson St	Webber	Undef	0.000	0.014	0.014	40860	5	19	0	0	0	0	0	0	0	0	0	0	0	0		
YLR:	S Jefferson St	Webber	Webber	Asp	0.014	0.050	0.036	40860	5	19	2	0	0	0	0	0	0	0	0	0	0		
YLR:	S Jefferson St	Webber	Railroad	Asp	0.050	0.155	0.105	40860	5	19	2	24	0	0	0	0	0	0	0	0	0		
YLR:	S Jefferson St	Railroad	Adams	Asp	0.155	0.217	0.062	40860	5	19	2	28	0	0	0	0	0	0	0	0	3		
YLR:	S Jefferson St	Adams	Main	Asp	0.217	0.279	0.062	40860	5	19	2	36	0	0	0	0	0	0	0	0	3		
YLR:	N Jefferson St	Main	Washington	Asp	0.279	0.343	0.064	40860	4	17	2	27	0	0	0	0	0	0	0	0	3		
YLR:	N Jefferson St	Washington	Lafayette	Asp	0.343	0.405	0.062	40860	4	17	2	25	0	0	0	0	0	0	0	0	3		
YLR:	N Jefferson St	Lafayette	Bliss	Comp	0.405	0.489	0.084	40860	4	17	2	29	0	0	0	0	0	0	0	0	3		
YLR:	N Jefferson St	Bliss	Lincoln	Comp	0.489	0.549	0.060	40860	4	17	2	26	0	0	0	0	0	0	0	0	3		
YLR:	N Jefferson St	Lincoln	Jones	Asp	0.549	0.639	0.090	40860	4	17	2	26	0	0	0	0	0	0	0	0	3		
YLR:	N Jefferson St	Jones	Allen	Asp	0.639	0.759	0.120	40860	4	17	2	26	0	0	0	0	0	0	0	0	3		



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
	YLR:	N Jefferson St	Allen	Fargo	Asp	0.759	0.799	0.040	40860		4	17	2	26	0	0	0	0	0	0	0	0	3
	YLR:	N Jefferson St	Fargo	City/Twp Line	Asp	0.799	0.823	0.024	40860		2	17	2	0	0	0	0	0	0	0	0	0	0
	YLR:	N Jefferson St	City/Twp Line	Hill	Undef	0.852	0.884	0.032	40860	UNK	2	17	0	0	0	0	0	0	0	0	0	0	0
	YLR:	N Jefferson St	Hill	City/Twp Line	Undef	0.884	0.908	0.024	40860		2	17	0	0	0	0	0	0	0	0	0	0	0
	YLR:	N Jefferson St	City/Twp Line	City/Twp Line	Undef	1.152	1.205	0.053	40860	UNK	2	17	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.932														
0503709	Johnson St																						
	YLR:	Johnson St	Lafayette valley gutters NEEEDS CRACKSEALING	Benton	Asp	0.000	0.055	0.055	40860		5	19	2	23	0	0	0	0	0	0	0	0	0
	YLR:	Johnson St	Benton	Lincoln	Asp	0.055	0.101	0.046	40860		5	19	2	23	0	0	0	0	0	0	0	0	0
	YLR:	Johnson St	Lincoln	Jones	Asp	0.101	0.189	0.088	40860		5	19	2	0	0	0	0	0	0	0	0	0	0
valley gutter. At intersection of M-21 & Johnson (S of M-21) water standing in intersection during rain or snow thaw. Catch basin is down in yard and has to be trenched each time to drain to the basin. NEEDS CRACKSEALING																							
	YLR:	Johnson St	Jones	Prospect	Asp	0.189	0.244	0.055	40860		5	19	2	0	0	0	0	0	0	0	0	0	0
	YLR:	Johnson St	Prospect		Asp	0.244	0.296	0.052	40860		5	19	2	25	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.296														
0510807	Jones St																						
	YLR:	Jones St	Jefferson	Batson	Asp	0.000	0.114	0.114	40860		5	19	2	27	0	0	0	0	0	0	0	0	3
	YLR:	Jones St	Batson	Bagley	Asp	0.114	0.184	0.070	40860		5	19	2	27	0	0	0	0	0	0	0	0	3
	YLR:	Jones St	Bagley	Morse	Asp	0.184	0.253	0.069	40860		5	19	2	29	0	0	0	0	0	0	0	0	3
	YLR:	Jones St	Morse	Johnson	Asp	0.253	0.351	0.098	40860		5	19	2	23	0	0	0	0	0	0	0	0	3
intersection could use a patch NEEDS CRACKSEALING																							
	YLR:	Jones St	Johnson		Asp	0.351	0.537	0.186	40860		5	19	2	23	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.537														
0510708	Kaiser St																						
	YLR:	Kaiser St	Forest a couple of bad dips NEEDS CRACKSEALING	Chapman	Asp	0.000	0.054	0.054	40860		5	19	2	25	0	0	0	0	0	0	0	0	2
	YLR:	Kaiser St	Chapman	Fargo	Asp	0.054	0.105	0.051	40860		5	19	2	23	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.105														



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
3340735	YLR:	Kidd St	Adams	Main	Asp	0.000	0.064	0.064	40860		4	17	2	40	0	0	0	0	0	0	0	3	
	YLR:	Kidd St	Main	Washington	Asp	0.064	0.125	0.061	40860		4	17	2	40	0	0	0	0	0	0	0	3	
	Total Mileage for Road:								0.125														
	YLR:	Kimball St	Main	Washington	Asp	0.000	0.061	0.061	40860		9	0	1	17	0	0	0	0	0	0	0	0	
	YLR:	Kimball St	Washington	High	Asp	0.061	0.121	0.060	40860		9	0	1	17	0	0	0	0	0	0	0	0	
Total Mileage for Road:								0.121															
0503509	YLR:	King St	Hackett	Lincoln	Asp	0.000	0.195	0.195	40860		5	19	2	25	0	0	0	0	0	0	0	3	
	YLR:	King St	Lincoln	Branch	Asp	0.195	0.292	0.097	40860		5	19	2	25	0	0	0	0	0	0	0	3	
	YLR:	King St	Branch	Forest	Asp	0.292	0.344	0.052	40860		5	19	2	25	0	0	0	0	0	0	0	3	
	YLR:	King St	Forest	Chapman	Asp	0.344	0.395	0.051	40860		5	19	2	25	0	0	0	0	0	0	0	3	
	YLR:	King St	Chapman	Fargo	Asp	0.395	0.448	0.053	40860		5	19	2	25	0	0	0	0	0	0	0	3	
	Total Mileage for Road:								0.448														
0504103	YLR:	King St	Washington	Hackett	Conc	0.000	0.132	0.132	40860		5	19	1	14	0	0	0	0	0	0	0	3	
	Total Mileage for Road:								0.132														
0510610	YLR:	Lafayette St	Union	Davis	Asp	0.000	0.080	0.080	40860		5	19	2	30	0	0	0	0	0	0	0	3	
	YLR:	Lafayette St	Davis	Rich	Asp	0.080	0.162	0.082	40860		5	19	2	31	0	0	0	0	0	0	0	3	
	broken basin, top curb, framing broke just west of Rich on North side of the street NEEEDS CRACKSEALING																						
	YLR:	Lafayette St	Rich	Division	Asp	0.162	0.234	0.072	40860		5	19	2	32	0	0	0	0	0	0	0	3	
	NEEEDS CRACKSEALING																						
	YLR:	Lafayette St	Division	Jackson	Asp	0.234	0.327	0.093	40860		5	19	2	32	0	0	0	0	0	0	0	0	3
	NEEEDS CRACKSEALING																						
	YLR:	Lafayette St	Jackson	Jefferson	Asp	0.327	0.455	0.128	40860		5	19	2	31	0	0	0	0	0	0	0	0	3
NEEEDS CRACKSEALING																							
YLR:	Lafayette St	Jefferson	Pearl	Asp	0.455	0.652	0.197	40860		5	19	2	28	0	0	0	0	0	0	0	0	3	
NEEEDS CRACKSEALING																							
YLR:	Lafayette St	Pearl	Morse	Asp	0.652	0.710	0.058	40860		5	19	2	28	0	0	0	0	0	0	0	0	3	
NEEEDS CRACKSEALING																							



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
	YLR:	Lafayette St	Morse	Johnson	Asp	0.710	0.809	0.099	40860		5	19	2	26	0	0	0	0	0	0	0	0	3
		NEEDS CRACKSEALING																					
	YLR:	Lafayette St	Johnson	Stevenson	Asp	0.809	0.868	0.059	40860		5	19	2	21	0	0	0	0	0	0	0	0	0
		valley gutter NEEDS CRACKSEALING																					
YLR:	Lafayette St	Stevenson	Lovell	Asp	0.868	0.929	0.061	40860		5	19	2	0	0	0	0	0	0	0	0	0	0	0
		NEEDS CRACKSEALING																					
Total Mileage for Road:								0.929															
3340822	Lafayette St																						
YLR:	Lafayette St	Lovell	Undef	0.000	0.019	0.019	40860		5	19	0	0	0	0	0	0	0	0	0	0	0	0	0
		private																					
Total Mileage for Road:								0.019															
0510004	Lawton St																						
YLR:	Lawton St	Forest	Fargo	Asp	0.000	0.105	0.105	40860		5	19	2	23	0	0	0	0	0	0	0	0	0	0
		NEEDS CRACKSEALING																					
Total Mileage for Road:								0.105															
0510102	Library Ct																						
YLR:	Library Ct	Main	Washington	Asp	0.000	0.062	0.062	40860		4	17	2	43	0	0	0	0	0	0	0	0	0	3
Total Mileage for Road:								0.062															
0510005	Louisa St																						
YLR:	Louisa St	Forest	Asp	0.000	0.043	0.043	40860		5	19	1	15	0	0	0	0	0	0	0	0	0	0	0
		NEEDS CRAKSEALING																					
YLR:	Louisa St	Forest	City/Twp Line	Asp	0.043	0.151	0.108	40860		5	19	2	18	0	0	0	0	0	0	0	0	0	0
		fargo to here is 21 NEEDSCRAKSEALING																					
Total Mileage for Road:								0.151															
0503702	Lovell Ct																						
YLR:	Lovell Ct	Terrace	Lincoln	Asp	0.000	0.135	0.135	40860		5	19	2	21	0	0	0	0	0	0	0	0	0	3
		named lovel place has a jut in it																					
Total Mileage for Road:								0.135															
0503801	Lovell St																						
YLR:	Lovell St	Washington	Lafayette	Asp	0.000	0.051	0.051	40860		5	19	2	0	0	0	0	0	0	0	0	0	0	0
		NEEDS CRACKSEALING																					
YLR:	Lovell St	Lafayette	Lafayette	Asp	0.051	0.062	0.011	40860		5	19	2	25	0	0	0	0	0	0	0	0	0	0
		NEEDS CRACKSEALING																					
YLR:	Lovell St	Lafayette	Lincoln	Asp	0.062	0.148	0.086	40860		5	19	2	25	0	0	0	0	0	0	0	0	0	0
		valley gutter NEEDS CRACKSEALING																					



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
Total Mileage for Road:									0.148														
3340114	E Lytle St																						
YLR:	E Lytle St	Union	Townsend	Asp	0.000	0.095	0.095	40860			5	19	2	28	0	0	0	0	0	0	0	0	3
YLR:	E Lytle St	Townsend		Asp	0.095	0.136	0.041	40860			5	19	2	28	0	0	0	0	0	0	0	0	3
from basin on NE corner to 208 there is a grooved strip along gutter pan, but it fills with dirt and leaves and won't allow the water to flow to the basin.																							
Total Mileage for Road:									0.136														
0510007	W Lytle St																						
YLR:	W Lytle St	Cyrus	Pleasant	Asp	0.000	0.075	0.075	40860			5	19	2	30	0	0	0	0	0	0	0	0	3
NEEDS CRACKSEALING																							
YLR:	W Lytle St	Pleasant	Union	Asp	0.075	0.150	0.075	40860			5	19	2	30	0	0	0	0	0	0	0	0	3
NEEDS CRACK SEALING																							
Total Mileage for Road:									0.150														
0502809	M 21																						
YLR:	W Bluewater Hwy	City/Twp Line	Potters	Undef	10.480	10.661	0.181	40860	UNK		1	16	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Bluewater Hwy	Potters	Yeomans	Undef	10.661	11.074	0.413	40860			1	16	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Bluewater Hwy	Yeomans	Wall	Undef	11.074	11.271	0.197	40860			1	16	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.791														
0509805	E Main St																						
YLR:	W Main St	City/Twp Line	City/Twp Line	Undef	1.438	2.036	0.598	40860	UNK		2	17	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Main St	Wall	City/Twp Line	Undef	2.133	2.462	0.329	40860			2	17	0	0	0	0	0	0	0	0	0	0	0
YLR:	W Main St	Vanderheyden	Yeomans	Asp	3.052	3.324	0.272	40860			4	17	2	23	0	0	0	0	0	0	0	0	3
MILLED AND FILLED(BLACKTOPPED) 2004																							
YLR:	W Main St	Yeomans	Adams	Asp	3.324	3.454	0.130	40860			4	17	2	36	0	0	0	0	0	0	0	0	3
MILLED AND FILLED (BACKTOPPED) 2004																							
YLR:	W Main St	Adams	Kimball	Asp	3.454	3.537	0.083	40860			4	17	2	0	0	0	0	0	0	0	0	0	3
MILLED AND FILLED (BLACKTOPPED) 2004																							
YLR:	W Main St	Kimball	Dexter	Asp	3.537	3.614	0.077	40860			4	17	2	36	0	0	0	0	0	0	0	0	3
MILLED AND FILLED (BLAKTOPPED) 2004																							
YLR:	W Main St	Dexter	Steele	Br	3.614	3.731	0.117	40860			4	17	2	50	0	0	0	0	0	0	0	0	3
YLR:	W Main St	Steele	Depot	Br	3.731	3.845	0.114	40860			4	17	2	50	0	0	0	0	0	0	0	0	3
YLR:	W Main St	Depot	Kidd	Br	3.845	3.919	0.074	40860			4	17	2	50	0	0	0	0	0	0	0	0	3
YLR:	W Main St	Kidd	Hudson	Br	3.919	3.969	0.050	40860			4	17	2	43	0	0	0	0	0	0	0	0	3



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Type Left	Right	C&G
	YLR:	E Main St	Hudson	Library	Br	3.969	4.008	0.039	40860		4	17	2	38	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	Library	Church	Br	4.008	4.029	0.021	40860		4	17	2	34	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	Church	Rich	Br	4.029	4.132	0.103	40860		4	17	2	39	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	Rich	Ellis	Br	4.132	4.227	0.095	40860		4	17	2	38	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	Ellis	Jackson	Br	4.227	4.297	0.070	40860		4	17	2	38	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	Jackson	Jefferson	Br	4.297	4.412	0.115	40860		4	17	2	38	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	Jefferson	Stevenson	Br	4.412	4.475	0.063	40860		4	17	2	23	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	Stevenson	Mill	Asp	4.475	4.548	0.073	40860		4	17	2	24	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	Mill	Cleveland	Asp	4.548	4.814	0.266	40860		4	17	2	24	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	Cleveland	City/Twp Line	Asp	4.814	4.924	0.110	40860		4	17	2	29	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	City/Twp Line	Beardsley	Asp	5.622	5.662	0.040	40860	UNK	2	17	2	23	0	0	0	0	3	3	2	2	0
	YLR:	E Main St	Beardsley	Beardsley/Main Cutoff	Asp	5.662	5.684	0.022	40860		3	19	3	35	0	0	0	0	0	0	0	0	3
	YLR:	E Main St	Beardsley/Main Cutoff	City/Twp Line	Asp	5.684	5.839	0.155	40860		3	19	2	24	0	0	0	0	3	5	3	3	0
Total Mileage for Road:									3.016														
0510902	Maple Rd																						
	YLR:	Maple Rd	Oak	City/Twp Line	Asp	0.000	0.059	0.059	40860		5	19	2	16	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.059														
0504102	Marshall Ct																						
	YLR:	Marshall Ct	State		Asp	0.000	0.053	0.053	40860		5	19	1	12	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.053														
0510904	Melody Ln																						
	YLR:	Melody Ln	View	Prospect	Asp	0.000	0.035	0.035	40860		5	19	2	32	0	0	0	0	0	0	0	0	3
STREET NEEDS RESURFACING																							
	YLR:	Melody Ln	Prospect	Highland	Asp	0.035	0.070	0.035	40860		5	19	2	31	0	0	0	0	0	0	0	0	3
STREET NEEDS RESURFACING																							
Total Mileage for Road:									0.070														
0510603	Mill St																						
	YLR:	Mill St			Undef	0.000	0.124	0.124	40860		5	19	0	0	0	0	0	0	0	0	0	0	0



## Detailed Road and Segment Report

0503506      Nicholson Rd  
RoadSoft GIS v5.8d



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
0504109	W North St	Nicholson Rd valley gutter	City/Twp Line	Lincoln	Asp	0.155	0.193	0.038	40860	UNK	3	19	2	25	0	0	0	0	0	0	0	0	0
		Nicholson Rd done 3 years ago	Lincoln		Asp	0.193	0.323	0.130	40860		3	19	2	25	0	0	0	0	0	0	0	0	0
		Nicholson Rd		Branch	Undef	0.323	0.328	0.005	40860	UNK	9	0	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.173														
3340044	Oak St																						
		W North St	State	Dexter	Asp	0.000	0.219	0.219	40860		2	19	0	0	0	0	0	0	0	0	0	0	0
		W North St	Dexter	City/Twp Line	Asp	0.219	0.373	0.154	40860		2	19	0	0	0	0	0	0	0	0	0	0	0
		W North St	City/Twp Line	Apple Tree	Asp	0.373	0.414	0.041	40860	UNK	2	19	2	22	0	0	0	0	0	0	0	0	0
		W North St	Apple Tree		Asp	0.414	0.444	0.030	40860		2	19	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.444														
3340829	Oak St																						
		Oak St	Washington	Maple	Asp	0.000	0.056	0.056	40860		5	19	2	16	0	0	0	0	0	0	0	0	0
		Oak St	Maple		Asp	0.056	0.097	0.041	40860		9	0	2	16	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.097														
3340547	Oakwood Ct																						
		Oakwood Ct	Ridgewood		Asp	0.000	0.048	0.048	40860		5	19	2	22	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.048														
0510105	Oakwood Dr																						
		Oakwood Dr	Ridgewood		Asp	0.000	0.061	0.061	40860		5	19	2	26	0	0	0	0	0	0	0	0	3
	Total Mileage for Road:									0.061													
0510105	Park St																						
		Park St	Forest Hill		Asp	0.000	0.049	0.049	40860		5	19	2	16	0	0	0	0	0	0	0	0	0
		NEEDS CRACKSEALING																					
		Forest Hill Ave		Washington	Asp	0.049	0.169	0.120	40860	UNK	5	19	2	23	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.169														



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	AADT Year	Shldr Width Left	Shldr Width Right	Shldr Type Left	Shldr Type Right	C&G
0503707	Pearl St																						
	YLR:	Pearl St	Lafayette	Lincoln	Asp	0.000	0.121	0.121	40860		5	19	2	25	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.121														
0503607	Pleasant St																						
	YLR:	Pleasant St	Washington	Amphlett	Asp	0.000	0.030	0.030	40860		5	19	2	22	0	0	0	0	0	0	0	0	0
	YLR:	Pleasant St	Amphlett	High	Asp	0.030	0.086	0.056	40860		5	19	2	22	0	0	0	0	0	0	0	0	0
		valley gutter doesn't go all the way to high																					
	YLR:	Pleasant St	High	Yeomans	Asp	0.086	0.114	0.028	40860		5	19	2	30	0	0	0	0	0	0	0	0	3
		ROAD NEEDS BLACKTOPPING																					
	YLR:	Pleasant St	Yeomans	Summit	Asp	0.114	0.149	0.035	40860		5	19	2	30	0	0	0	0	0	0	0	0	3
		ROAD NEEDS BLACK TOPPIN																					
	YLR:	Pleasant St	Summit	Tower	Asp	0.149	0.213	0.064	40860		5	19	2	30	0	0	0	0	0	0	0	0	3
		ROAD NEEDS BLACKTOPPING																					
	YLR:	Pleasant St	Tower	Lincoln	Asp	0.213	0.274	0.061	40860		5	19	2	30	0	0	0	0	0	0	0	0	3
		ROAD NEEDS BLACKTOPPING																					
Total Mileage for Road:									0.274														
0503608	Pleasant St																						
	YLR:	Pleasant St	Lincoln	Lytle	Asp	0.000	0.063	0.063	40860		5	19	2	19	0	0	0	0	0	0	0	0	0
		STREET NEEDS RESURFACING																					
	YLR:	Pleasant St	Lytle		Undef	0.063	0.119	0.056	40860		5	19	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.119														
0502810	Potters Rd																						
	YLR:	Potters Rd	City/Twp Line	Bluewater	Undef	10.226	10.431	0.205	40860	UNK	2	17	0	0	0	0	0	0	0	0	0	0	0
	YLR:	Potters Rd	Bluewater		Undef	10.431	10.673	0.242	40860		9	0	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.447														
0510907	Prairie View Dr																						
	YLR:	Prairie View Dr	Sky View	City/Twp Line	Asp	0.000	0.051	0.051	40860		5	19	2	32	0	0	0	0	0	0	0	0	3
		from Sky View to the E on both sides of the road water ponds along gutter strip																					
Total Mileage for Road:									0.051														
0510901	Prospect St																						
	YLR:	Prospect St	Morse	Johnson	Asp	0.000	0.102	0.102	40860		5	19	2	27	0	0	0	0	0	0	0	0	3
		at 628 Prospect (N side) water ponds in gutter strip, too flat to allow water to flow to catch basin																					
	YLR:	Prospect St	Johnson	Robertson	Asp	0.102	0.156	0.054	40860		5	19	2	25	0	0	0	0	0	0	0	0	0



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
0510508	YLR:	Prospect St valley gutter	Robertson	Crawford	Asp	0.156	0.223	0.067	40860		5	19	2	23	0	0	0	0	0	0	0	0	0
	YLR:	Prospect St	Crawford	Melody	Asp	0.223	0.353	0.130	40860		5	19	2	0	0	0	0	0	0	0	0	0	0
	Total Mileage for Road:								0.353														
	YLR:	Railroad St	Hudson	Colby	Asp	0.000	0.084	0.084	40860		5	19	2	20	0	0	0	0	0	0	0	0	3
	YLR:	Railroad St	Colby	Welton	Asp	0.084	0.142	0.058	40860		5	19	2	20	0	0	0	0	0	0	0	0	3
0510605	YLR:	Railroad St water sitting in the road. Between 215 Railroad and Welton pockets of water in low areas in middle of roadway	Welton	DeQuack	Asp	0.142	0.222	0.080	40860		5	19	2	21	0	0	0	0	0	0	0	0	3
	YLR:	Railroad St	DeQuack	Jackson	Asp	0.222	0.333	0.111	40860		5	19	2	21	0	0	0	0	0	0	0	0	3
	Total Mileage for Road:								0.333														
	YLR:	Railroad St water sitting in the road and causing it to break away from edges	Jackson	Garrity	Asp	0.000	0.048	0.048	40860		5	19	2	26	0	0	0	0	0	0	0	0	0
	YLR:	Railroad St should also continue from jefferson to mill water sitting in road	Garrity	Jefferson	Asp	0.048	0.110	0.062	40860		5	19	2	26	0	0	0	0	0	0	0	0	0
3340759	Total Mileage for Road:								0.110														
	YLR:	Reiger St	Wall		Undef	0.000	0.026	0.026	40860		3	19	0	0	0	0	0	0	0	0	0	0	0
	YLR:	Reiger St			Undef	0.026	0.133	0.107	40860	UNK	9	0	0	0	0	0	0	0	0	0	0	0	0
	Total Mileage for Road:								0.133														
	YLR:	Rice St RECONSTRUCTED 2004	Yeomans	Hackett	Asp	0.000	0.053	0.053	40860		4	17	2	28	0	0	0	0	0	0	0	0	3
0503507	YLR:	Rice St RECONSTRUCTED 2004	Hackett	Lincoln	Asp	0.053	0.248	0.195	40860		4	17	2	28	0	0	0	0	0	0	0	0	3
	Total Mileage for Road:								0.248														
	YLR:	Rich St NEEDS CRACKSEALING	Main	Washington	Asp	0.000	0.061	0.061	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
	YLR:	Rich St covered concrete? NEEEDS CRACKSEALING	Washington	Lafayette	Asp	0.061	0.124	0.063	40860		5	19	2	28	0	0	0	0	0	0	0	0	3



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
0510805	Ridgewood Ct	YLR: Rich St	Lafayette	Terrace	Asp	0.124	0.162	0.038	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
		NEEEDS CRACKSEALING																					
		YLR: Rich St	Terrace	Summit	Asp	0.162	0.221	0.059	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
		NEEEDS CRACKSEALING																					
0510803	Ridgewood Dr	YLR: Rich St	Summit	Lincoln	Asp	0.221	0.301	0.080	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
		curbs bad on all of rich strret																					
		YLR: Rich St	Lincoln	Fargo	Asp	0.301	0.551	0.250	40860		5	19	2	23	0	0	0	0	0	0	0	0	3
		Total Mileage for Road: 0.551																					
0510805	Ridgewood Ct	YLR: Ridgewood Ct	Ridgewood		Asp	0.000	0.103	0.103	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
		ridgewood court extension is very poor probably 3 or 2																					
		Total Mileage for Road: 0.103																					
		0510803	Ridgewood Dr	YLR: Ridgewood Dr	Fargo	Ridgewood	Asp	0.000	0.128	0.128	40860		5	19	2	27	0	0	0	0	0	0	0
YLR: Ridgewood Dr	Ridgewood			Oakwood	Asp	0.128	0.211	0.083	40860		5	19	2	27	0	0	0	0	0	0	0	0	3
YLR: Ridgewood Dr	Oakwood			Oakwood	Asp	0.211	0.221	0.010	40860		5	19	2	26	0	0	0	0	0	0	0	0	3
YLR: Ridgewood Dr	Oakwood				Asp	0.221	0.280	0.059	40860		5	19	2	26	0	0	0	0	0	0	0	0	3
Total Mileage for Road: 0.280																							
0506204	W Riverside Dr	YLR: W Riverside Dr	Harwood	City/Twp Line	Undef	6.648	6.662	0.014	40860		2	17	0	0	0	0	0	0	0	0	0	0	0
		YLR: W Riverside Dr	City/Twp Line	City/Twp Line	Undef	6.662	6.795	0.133	40860	UNK	2	17	0	0	0	0	0	0	0	0	0	0	0
		YLR: W Riverside Dr	City/Twp Line	City/Twp Line	Undef	6.934	7.283	0.349	40860	UNK	2	17	0	0	0	0	0	0	0	0	0	0	0
		Total Mileage for Road: 0.496																					
3340760	Robertson Ct	YLR: Robertson Ct	Prospect		Undef	0.000	0.036	0.036	40860		9	0	0	0	0	0	0	0	0	0	0	0	0
		Total Mileage for Road: 0.036																					
0510709	Roselawn Dr	YLR: Roselawn Dr	Forest	Fargo	Asp	0.000	0.109	0.109	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
		asphalt curbs & gutters NEEDS CRACKSEALING																					
Total Mileage for Road: 0.109																							
0510618	Silver St																						



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Type Left	Right	C&G
	YLR:	Silver St	Bayard		Asp	0.000	0.037	0.037	40860		5	19	1	12	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.037														
0503802	Sky View Dr																						
YLR:	Sky View Dr	Lincoln	View	Asp	0.000	0.146	0.146	40860		5	19	2	32	0	0	0	0	0	0	0	0	3	
STREET EEDS RESURFACING																							
YLR:	Sky View Dr	View	Prairie View	Asp	0.146	0.181	0.035	40860		5	19	2	31	0	0	0	0	0	0	0	0	3	
STREET NEEDS RESURFACING																							
YLR:	Sky View Dr	Prairie View	Sky View	Asp	0.181	0.218	0.037	40860		5	19	2	32	0	0	0	0	0	0	0	0	3	
STREET NEEDS RESURFACING																							
Total Mileage for Road:									0.218														
3340549	Sky View Dr																						
YLR:	Sky View Dr	Sky View	Sky View	Asp	0.000	0.067	0.067	40860		5	19	2	43	0	0	0	0	0	0	0	0	3	
divided at the end NEEDSCRAKSEALING																							
Total Mileage for Road:									0.067														
3340046	Sky View Trl																						
YLR:	Sky View Trl	Sky View		Asp	0.000	0.038	0.038	40860		5	19	2	27	0	0	0	0	0	0	0	0	3	
Total Mileage for Road:									0.038														
3340550	Sky View Trl																						
YLR:	Sky View Trl	Sky View	Whitetail	Asp	0.000	0.203	0.203	40860		5	19	2	27	0	0	0	0	0	0	0	0	3	
NEEDS CRACKSEALING																							
YLR:	Sky View Trl	Whitetail		Asp	0.203	0.471	0.268	40860		5	19	2	27	0	0	0	0	0	0	0	0	3	
NEEDS CRACKSEALING																							
Total Mileage for Road:									0.471														
0503510	N State Rd																						
YLR:	N State Rd	Marshall	Hackett	Asp	0.000	0.083	0.083	40860		5	19	2	30	0	0	0	0	0	0	0	0	3	
NEEDS CRACKSEALING																							
YLR:	N State Rd	Hackett	Lincoln	Asp	0.083	0.277	0.194	40860		5	19	2	34	0	0	0	0	0	0	0	0	3	
ONE BAD SPOT NEEDS CRACKSEALING																							
YLR:	N State Rd	Lincoln	Branch	Asp	0.277	0.375	0.098	40860		1	16	2	0	0	0	0	0	0	0	0	0	0	
YLR:	N State Rd	Branch	Forest	Asp	0.375	0.424	0.049	40860		1	16	2	0	0	0	0	0	0	0	0	0	0	
YLR:	N State Rd	Forest	Chapman	Asp	0.424	0.476	0.052	40860		1	16	2	0	0	0	0	0	0	0	0	0	0	
YLR:	N State Rd	Chapman	Fargo	Asp	0.476	0.530	0.054	40860		1	16	2	0	0	0	0	0	0	0	0	0	0	
YLR:	N State Rd	Fargo	Elmwood	Asp	0.530	0.668	0.138	40860		1	16	2	0	0	0	0	0	0	0	0	0	0	



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
	YLR:	N State Rd	Elmwood	City/Twp Line	Asp	0.668	0.703	0.035	40860		1	16	2	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.703														
0503603	Steele St																						
YLR:	Steele St	Dexter	Brown	Asp	0.000	0.263	0.263	40860		4	17	3	38	0	0	0	0	0	0	0	0	3	
			along in front of Ionia Welding water ponds																				
			there are a few other places where some water ponds on this street																				
YLR:	Steele St	Brown	Adams	Asp	0.263	0.560	0.297	40860		4	17	3	38	0	0	0	0	0	0	0	0	3	
YLR:	Steele St	Adams	Main	Asp	0.560	0.622	0.062	40860		4	17	2	47	0	0	0	0	0	0	0	0	3	
YLR:	Steele St	Main	Washington	Asp	0.622	0.681	0.059	40860		4	17	2	47	0	0	0	0	0	0	0	0	3	
Total Mileage for Road:									0.681														
0510609	Stevenson Pl																						
YLR:	Stevenson Pl	Main		Asp	0.000	0.089	0.089	40860		5	19	2	20	0	0	0	0	0	0	0	0	3	
Total Mileage for Road:									0.089														
0503710	Stevenson St																						
YLR:	Stevenson St	Washington	Lafayette	Asp	0.000	0.065	0.065	40860		5	19	2	20	0	0	0	0	0	0	0	0	0	
			watch drains, can clog																				
YLR:	Stevenson St	Lafayette	Lincoln	Asp	0.065	0.157	0.092	40860		5	19	2	20	0	0	0	0	0	0	0	0	0	
			some water that sits in the road																				
Total Mileage for Road:									0.157														
0510801	Stivens St																						
YLR:	Stivens St	Baldie	Center	Asp	0.000	0.095	0.095	40860		5	19	1	18	0	0	0	0	0	0	0	0	0	
			valley gutter																				
YLR:	Stivens St	Center		Undef	0.095	0.142	0.047	40860		5	19	0	0	0	0	0	0	0	0	0	0	0	
			not ours																				
Total Mileage for Road:									0.142														
0510704	Summit St																						
YLR:	Summit St	Pleasant	Union	Asp	0.000	0.093	0.093	40860		5	19	2	29	0	0	0	0	0	0	0	0	3	
YLR:	Summit St	Union	Rich	Asp	0.093	0.262	0.169	40860		5	19	2	28	0	0	0	0	0	0	0	0	0	
			valley gutter and parking guardrail on south side																				
Total Mileage for Road:									0.262														
0509902	Taylor Ct																						



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
	YLR:	Taylor Ct valley gutter	Hackett		Asp	0.000	0.092	0.092	40860		5	19	2	21	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.092														
0510802	Tower St																						
	YLR:	Tower St NEEEDS CRACKSEALING ?	Pleasant	Union	Asp	0.000	0.092	0.092	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.092														
0503610	Townsend St																						
	YLR:	Townsend St NEEDS CRACKSEALING	Lincoln	Lytle	Asp	0.000	0.076	0.076	40860		5	19	2	28	0	0	0	0	0	0	0	0	3
	YLR:	Townsend St doesn't extend to fargo NEEDS CRACKSEALING	Lytle	Fargo	Asp	0.076	0.251	0.175	40860		5	19	2	28	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.251														
0506310	E Tuttle Rd																						
	YLR:	E Tuttle Rd	City/Twp Line	City/Twp Line	Undef	2.311	2.331	0.020	40860	UNK	2	17	0	0	0	0	0	0	0	0	0	0	0
	YLR:	E Tuttle Rd	City/Twp Line	City/Twp Line	Undef	2.498	2.733	0.235	40860	UNK	2	17	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.255														
0503609	Union St																						
	YLR:	Union St	Washington	Lafayette	Conc	0.000	0.062	0.062	40860		4	19	2	29	0	0	0	0	0	0	0	0	3
	YLR:	Union St	Lafayette	High	Conc	0.062	0.085	0.023	40860		4	19	2	29	0	0	0	0	0	0	0	0	3
	YLR:	Union St	High	Summit	Conc	0.085	0.147	0.062	40860		4	19	2	29	0	0	0	0	0	0	0	0	3
	YLR:	Union St	Summit	Tower	Asp	0.147	0.207	0.060	40860		4	19	2	35	0	0	0	0	0	0	0	0	3
	YLR:	Union St	Tower	Lincoln	Asp	0.207	0.262	0.055	40860		4	19	2	35	0	0	0	0	0	0	0	0	3
	YLR:	Union St	Lincoln	Lytle	Asp	0.262	0.322	0.060	40860		5	19	2	32	0	0	0	0	0	0	0	0	3
	YLR:	Union St	Lytle	Lytle	Asp	0.322	0.338	0.016	40860		5	19	2	32	0	0	0	0	0	0	0	0	3
	YLR:	Union St	Lytle	Fargo	Asp	0.338	0.511	0.173	40860		5	19	2	32	0	0	0	0	0	0	0	0	3
At 650 Union on E. side of road water ponds full length of property at curb.																							
Total Mileage for Road:									0.511														
0510905	S View Dr																						
	YLR:	South View Dr	Melody	Sky View	Asp	0.000	0.095	0.095	40860		5	19	2	32	0	0	0	0	0	0	0	0	3
some drainage problems from 929 E to 937 South View---too flat for it to let the ponding water flow to the catch basin. STREET NEEDS RESURFACING																							



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
Total Mileage for Road:									0.095														
0510103	Wager Pl																						
YLR:	Wager Pl		Washington	Asp	0.000	0.062	0.062	40860		5	19	1	13	0	0	0	0	0	0	0	0	0	1
right side is sidewalk. in front of 3 wager there is a hole about 2" to 4 "across that is starting to undermine the patch. It is about 6" deep. It is underminining next to a shutoff box. NEEEDS CRACKSEALING																							
Total Mileage for Road:									0.062														
0503501	Wall St																						
YLR:	Wall St	Main	City/Twp Line	Undef	0.000	0.077	0.077	40860		3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	City/Twp Line	City/Twp Line	Undef	0.077	0.097	0.020	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	City/Twp Line	City/Twp Line	Undef	0.097	0.137	0.040	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	City/Twp Line	City/Twp Line	Undef	0.137	0.148	0.011	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	City/Twp Line	City/Twp Line	Undef	0.148	0.167	0.019	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	City/Twp Line	Reiger	Undef	0.167	0.174	0.007	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	Reiger	City/Twp Line	Undef	0.174	0.202	0.028	40860		3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	City/Twp Line	City/Twp Line	Undef	0.202	0.227	0.025	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	City/Twp Line	Woods	Undef	0.227	0.341	0.114	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	Woods	City/Twp Line	Undef	0.341	0.446	0.105	40860		3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	City/Twp Line	Yeomans	Undef	0.446	0.618	0.172	40860	UNK	3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	Yeomans	Bluewater	Undef	0.618	0.711	0.093	40860		3	19	0	0	0	0	0	0	0	0	0	0	0	
YLR:	Wall St	Bluewater	Lincoln	Undef	0.711	1.011	0.300	40860		3	19	0	0	0	0	0	0	0	0	0	0	0	
Total Mileage for Road:									1.011														
0504903	E Washington St																						
YLR:	W Washington St		Yeomans	Conc	0.000	0.120	0.120	40860		5	19	2	20	0	0	0	0	0	0	0	0	3	
YLR:	W Washington St	Yeomans	King	Asp	0.120	0.164	0.044	40860		5	19	2	27	0	0	0	0	0	0	0	0	3	
RECONSTRUCTED 2004																							
YLR:	W Washington St	King	Kimball	Asp	0.164	0.370	0.206	40860		5	19	2	27	0	0	0	0	0	0	0	0	3	
RECONSTRUCTED 2004																							
YLR:	W Washington St	Kimball	Dexter	Asp	0.370	0.436	0.066	40860		5	19	2	26	0	0	0	0	0	0	0	0	3	
RECONSTRUCTED 2004																							
YLR:	W Washington St	Dexter	Dye	Asp	0.436	0.501	0.065	40860		4	17	2	36	0	0	0	0	0	0	0	0	3	
intersection has 3 lanes NEEDS CRACKSEALING																							



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Legal Dir	System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	AADT Year	Shldr Width Left	Shldr Width Right	Shldr Type Left	Shldr Type Right	C&G
YLR:	W Washington St	NEEDS CRACKSEALING	Dye	Steele	Asp	0.501	0.563	0.062	40860	4	17	2	36	0	0	0	0	0	0	0	0	0	3
YLR:	W Washington St		Steele	Depot	Asp	0.563	0.670	0.107	40860	4	17	2	36	0	0	0	0	0	0	0	0	0	3
YLR:	W Washington St	NEEDS CRACK SEALING	Depot	Pleasant	Asp	0.670	0.714	0.044	40860	4	17	2	35	0	0	0	0	0	0	0	0	0	3
YLR:	W Washington St	NEEDS CRACK SEALING	Pleasant	Kidd	Asp	0.714	0.754	0.040	40860	4	17	2	30	0	0	0	0	0	0	0	0	0	3
YLR:	W Washington St	NEEDS CRACKSEALING	Kidd	Union	Asp	0.754	0.803	0.049	40860	4	17	2	27	0	0	0	0	0	0	0	0	0	3
YLR:	E Washington St	NEEDS CRACKSEALING	Union	Library	Asp	0.803	0.842	0.039	40860	4	17	2	27	0	0	0	0	0	0	0	0	0	3
YLR:	E Washington St	NEEDS CRACK SEALING	Library	Rich	Asp	0.842	0.963	0.121	40860	4	17	2	27	0	0	0	0	0	0	0	0	0	3
YLR:	E Washington St	NEEDS CRACKSEALING	Rich	Jackson	Asp	0.963	1.130	0.167	40860	4	17	2	27	0	0	0	0	0	0	0	0	0	3
YLR:	E Washington St	NEEDS CRACK SEALING	Jackson	Jefferson	Asp	1.130	1.252	0.122	40860	4	17	2	29	0	0	0	0	0	0	0	0	0	3
YLR:	E Washington St	RECONSTRUCTION IN 2005	Jefferson	Wager	Asp	1.252	1.330	0.078	40860	4	17	2	29	0	0	0	0	0	0	0	0	0	3
YLR:	E Washington St	some curbs are quite bad some are new RECONSTRUCTION IN 2005	Wager	Morse	Asp	1.330	1.508	0.178	40860	4	17	2	28	0	0	0	0	0	0	0	0	0	3
YLR:	E Washington St	curbs are getting bad RECOSTRUCTION IN 2005	Morse	Forest Hill	Asp	1.508	1.543	0.035	40860	5	19	2	29	0	0	0	0	0	0	0	0	0	3
YLR:	E Washington St	valley gutter RECOSTRUCTION IN2005	Forest Hill	Forest Hill	Asp	1.543	1.642	0.099	40860	5	19	2	27	0	0	0	0	0	0	0	0	0	0
YLR:	E Washington St	valley gutter RECONSTRUCTION IN 2005	Forest Hill	Stevenson	Asp	1.642	1.664	0.022	40860	5	19	2	27	0	0	0	0	0	0	0	0	0	0
YLR:	E Washington St	valley gutter RECONSTRUCTION IN 2005	Stevenson	Oak	Asp	1.664	1.699	0.035	40860	5	19	2	24	0	0	0	0	0	0	0	0	0	0
YLR:	E Washington St	valley gutter RECONSTRUCTION IN 2005	Oak	Lovell	Asp	1.699	1.728	0.029	40860	5	19	2	26	0	0	0	0	0	0	0	0	0	0
YLR:	E Washington St	RECOSTROTION IN 2005	Lovell	City/Twp Line	Asp	1.728	1.760	0.032	40860	5	19	2	25	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									1.760														
0510507	Webber St																						
YLR:	Webber St		Colby	Welton	Asp	0.000	0.056	0.056	40860	5	19	2	20	0	0	0	0	0	0	0	0	0	3



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	Year	Shldr Left	Width Right	Shldr Left	Type Right	C&G
Total Mileage for Road:									0.056														
0510601	Webber St																						
YLR:	Webber St	Jackson	Jefferson	Asp	0.000	0.087	0.087	40860		5	19	2	38	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.087														
0510602	Webber St																						
YLR:	Webber St	Jefferson	Mill	UE	0.000	0.131	0.131	40860		5	19	1	12	0	0	0	0	0	0	0	0	0	0
this road is no longer maintained, railroad should be shown north of this road but is not ours																							
Total Mileage for Road:									0.131														
0504820	Wells St																						
YLR:	Wells St	Dexter		Asp	0.000	0.099	0.099	40860		5	19	2	27	0	0	0	0	0	0	0	0	0	0
valley gutter																							
YLR:	Wells St			Asp	0.099	0.198	0.099	40860		5	19	2	27	0	0	0	0	0	0	0	0	0	0
YLR:	Wells St			Asp	0.198	0.251	0.053	40860	UNK	9	0	2	22	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.251														
0510509	Welton St																						
YLR:	Welton St	Webber	Railroad	Asp	0.000	0.077	0.077	40860		5	19	2	20	0	0	0	0	0	0	0	0	0	3
Total Mileage for Road:									0.077														
3340551	Whitetail Ct																						
YLR:	Whitetail Ct	Sky View		Asp	0.000	0.157	0.157	40860		5	19	2	27	0	0	0	0	0	0	0	0	0	3
NEEDS CRACKSEALING																							
Total Mileage for Road:									0.157														
0513713	Woods Ave																						
YLR:	Woods Ave	Wall		Undef	0.000	0.155	0.155	40860		9	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.155														
3340772	Yeomans Ct																						
YLR:	Yeomans Ct	Pleasant		Undef	0.000	0.018	0.018	40860		9	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Mileage for Road:									0.018														
1868103	Yeomans St																						
YLR:	Yeomans St	Bluewater	City/Twp Line	Undef	0.000	0.112	0.112	40860		2	17	0	0	0	0	0	0	0	0	0	0	0	0
YLR:	Yeomans St	City/Twp Line	Wall	Undef	0.112	0.187	0.075	40860	UNK	2	17	0	0	0	0	0	0	0	0	0	0	0	0
YLR:	Yeomans St	Wall	Short	Undef	0.187	0.252	0.065	40860		2	17	0	0	0	0	0	0	0	0	0	0	0	0



Date: 24-Mar-05

## Detailed Road and Segment Report

PR No.	Road Name	Segment Name	From Description	To Description	Surf Subtype	P.O.B.	P.O.E.	Length	City/ Twp	Dir	Legal System	NFC	No. of Lanes	Surface Width	%Comm	ROW	AADT	AADT Year	Shldr Width Left	Shldr Width Right	Shldr Type Left	Shldr Type Right	C&G
YLR:	Yeomans St	City/Twp Line	Rice		Asp	1.041	1.125	0.084	40860	UNK	4	17	2	29	0	0	0	0	0	0	0	0	0
		gutter pan at city limits drops 4 to 5 inches																					
YLR:	Yeomans St	Rice	Washington		Asp	1.125	1.238	0.113	40860		4	17	2	29	0	0	0	0	0	0	0	0	3
YLR:	Yeomans St	Washington	Main		Asp	1.238	1.312	0.074	40860		4	17	2	29	0	0	0	0	0	0	0	0	3

Total Mileage for Road: 0.523

Total Mileage for all roads: 37.980



# Road Condition by ACT 51 Legal System

**Report Module:** Road Surface Management Analysis

**Today's Date:** Thursday, 24 March 2005

## Report Filters

<u>Field Name</u>	<u>Operator</u>	<u>Value</u>
Ownership	=	Ionia
Current Surface Rating	=	0. Not Rated,1. Failed,2. Very Poor,3. Poor,4. Fair,5. Fair,6. Good,7. Good,8. Very Good,9. Excellent,10. Excellent



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
<b>Legal System = 1 State Trunkline</b>														
0503406	E Bluewater Hwy													
		W Lincoln Ave	Nicholson	Rice	5.499	5.595	0.096	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Rice	Brooks	5.595	5.607	0.012	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Brooks	King	5.607	5.678	0.071	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	King	State	5.678	5.763	0.085	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	State	Harter	5.763	5.882	0.119	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Harter	Hall	5.882	5.941	0.059	Ionia	Urban Min Art	Comp	0	2004	3	-4
		W Lincoln Ave	Hall	Dexter	5.941	5.963	0.022	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Dexter	Baldie	5.963	6.064	0.101	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Baldie	Center	6.064	6.149	0.085	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Center	Cyrus	6.149	6.175	0.026	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Cyrus	Pleasant	6.175	6.234	0.059	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Pleasant	Pleasant	6.234	6.246	0.012	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Pleasant	Union	6.246	6.325	0.079	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Union	Townsend	6.325	6.421	0.096	Ionia	Urban Min Art	Asp	0	2004	3	-4
		W Lincoln Ave	Townsend		6.421	6.491	0.070	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave		Rich	6.491	6.503	0.012	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	Rich	Lovell	6.503	6.556	0.053	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	Lovell	Division	6.556	6.596	0.040	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	Division	Jackson	6.596	6.663	0.067	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	Jackson	Jackson	6.663	6.691	0.028	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	Jackson	Jefferson	6.691	6.799	0.108	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	Jefferson	Pearl	6.799	6.993	0.194	Ionia	Urban Min Art	Asp	0	2004	2	-7
		E Lincoln Ave	Pearl	Morse	6.993	7.051	0.058	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	Morse	Johnson	7.051	7.150	0.099	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	Johnson	Stevenson	7.150	7.208	0.058	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	Stevenson	Lovell	7.208	7.270	0.062	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	Lovell	City/Twp Line	7.270	7.302	0.032	Ionia	Urban Min Art	Asp	0	2004	3	-4
		E Lincoln Ave	City/Twp Line	Sky View	7.302	7.491	0.189	Ionia	Urban Min Art	Asp	0	2004	6	4
		E Lincoln Ave	Sky View	City/Twp Line	7.491	7.542	0.051	Ionia	Urban Min Art	Asp	0	2004	6	4
0504502	N Dexter St													
		S Dexter St	Brown	Wells	14.289	14.484	0.195	Ionia	Urban Min Art	Asp	0	2004	4	-1
		S Dexter St	Wells	Adams	14.484	14.605	0.121	Ionia	Urban Min Art	Asp	0	2004	3	-4
		S Dexter St	Adams	Main	14.605	14.667	0.062	Ionia	Urban Min Art	Asp	0	2004	3	-4
		N Dexter St	Main	Washington	14.667	14.731	0.064	Ionia	Urban Min Art	Asp	0	2004	3	-4



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0503510	N State Rd	N Dexter St	Washington	High	14.731	14.792	0.061	Ionia	Urban Min Art	Asp	0	2004	3	-4
		N Dexter St	High	Dexter	14.792	14.876	0.084	Ionia	Urban Min Art	Asp	0	2004	3	-4
		N Dexter St	Dexter Ct	Lincoln	14.876	15.034	0.158	Ionia	Urban Min Art	Asp	0	2004	3	-4
		N State Rd	Lincoln	Branch	0.277	0.375	0.098	Ionia	Urban Min Art	Asp	0	2004	2	-7
		N State Rd	Branch	Forest	0.375	0.424	0.049	Ionia	Urban Min Art	Asp	0	2004	2	-7
		N State Rd	Forest	Chapman	0.424	0.476	0.052	Ionia	Urban Min Art	Asp	0	2004	2	-7
		N State Rd	Chapman	Fargo	0.476	0.530	0.054	Ionia	Urban Min Art	Asp	0	2004	2	-7
		N State Rd	Fargo	Elmwood	0.530	0.668	0.138	Ionia	Urban Min Art	Asp	0	2004	2	-7
		N State Rd	Elmwood	City/Twp Line	0.668	0.703	0.035	Ionia	Urban Min Art	Asp	0	2004	2	-7

### Legal System = 2 County Primary

0510409	Beardsley Rd	Beardsley Rd	Main	Beardsley/Main Cutoff	0.000	0.019	0.019	Ionia	Urban Coll	Asp	0	2003	9	12
		Beardsley Rd	Beardsley/Main Cutoff	City/Twp Line	0.019	0.061	0.042	Ionia	Urban Coll	Asp	0	2004	8	12
		Beardsley Rd	City/Twp Line	Washington	0.061	0.069	0.008	Ionia	Urban Coll	Asp	0	2004	8	12
		Beardsley Rd	Washington	City/Twp Line	0.069	0.095	0.026	Ionia	Urban Coll	Asp	0	2004	8	12
		Beardsley Rd	City/Twp Line	City/Twp Line	0.095	0.352	0.257	Ionia	Urban Coll	Asp	0	2004	8	12
0503606	Cyrus St	Cyrus St	Vohler	City/Twp Line	0.407	0.431	0.024	Ionia	Urban Loc	Asp	0	2003	2	-8
0503706	N Jefferson St	N Jefferson St	Fargo	City/Twp Line	0.799	0.823	0.024	Ionia	Urban Coll	Asp	0	2005	8	8
0509805	E Main St	E Main St	City/Twp Line	Beardsley	5.622	5.662	0.040	Ionia	Urban Coll	Asp	0	2004	8	12
0504109	W North St	W North St	State	Dexter	0.000	0.219	0.219	Ionia	Urban Loc	Asp	0	1999	7	5
		W North St	Dexter	City/Twp Line	0.219	0.373	0.154	Ionia	Urban Loc	Asp	0	1999	7	5
		W North St	City/Twp Line	Apple Tree	0.373	0.414	0.041	Ionia	Urban Loc	Asp	0	2003	7	5
		W North St	Apple Tree		0.414	0.444	0.030	Ionia	Urban Loc	Asp	0	1999	7	5

### Legal System = 3 County Local

0509805	E Main St	E Main St	Beardsley	Beardsley/Main Cutoff	5.662	5.684	0.022	Ionia	Urban Loc	Asp	0	2004	8	12
		E Main St	Beardsley/Main Cutoff	City/Twp Line	5.684	5.839	0.155	Ionia	Urban Loc	Asp	0	2004	8	12
0503708	Morse St	Morse St	City/Twp Line	City/Twp Line	0.429	0.447	0.018	Ionia	Urban Loc	Asp	0	2005	9	12



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0503506	Nicholson Rd	Morse St	City/Twp Line	Gregmark	0.526	0.572	0.046	Ionia	Urban Loc	Asp	0	2003	6	4
		Morse St	Gregmark	City/Twp Line	0.572	0.620	0.048	Ionia	Urban Loc	Asp	0	2003	6	4
		Nicholson Rd	City/Twp Line	Lincoln	0.155	0.193	0.038	Ionia	Urban Loc	Asp	0	2003	6	4
		Nicholson Rd	Lincoln		0.193	0.323	0.130	Ionia	Urban Loc	Asp	0	2003	6	4
Legal System = 4 City Major														
0504901	E Adams St													
3340819	W Adams St	W Adams St	Dexter	Steele	0.000	0.124	0.124	Ionia	Urban Coll	Asp	0	2005	7	7
		W Adams St	Steele	Depot	0.124	0.240	0.116	Ionia	Urban Coll	Asp	0	2005	7	7
		W Adams St	Depot	Kidd	0.240	0.316	0.076	Ionia	Urban Coll	Asp	0	2005	7	7
		W Adams St	Kidd	Hudson	0.316	0.366	0.050	Ionia	Urban Coll	Asp	0	2005	7	7
		E Adams St	Hudson	Church	0.366	0.424	0.058	Ionia	Urban Coll	Asp	0	2005	7	7
		E Adams St	Church	Ellis	0.424	0.619	0.195	Ionia	Urban Coll	Asp	0	2005	7	7
		E Adams St	Ellis	Jackson	0.619	0.691	0.072	Ionia	Urban Coll	Asp	0	2005	7	7
	W Adams St	Main	Dexter	0.000	0.194	0.194	Ionia	Urban Coll	Asp	2001	2005	8	10	
0506409	Cleveland St													
		Cleveland St	City/Twp Line	Bayard	0.213	0.576	0.363	Ionia	Urban Coll	Asp	0	2005	9	13
		Cleveland St	Bayard	Harrison	0.576	0.651	0.075	Ionia	Urban Coll	Asp	0	2005	9	12
		Cleveland St	Harrison	Main	0.651	0.746	0.095	Ionia	Urban Coll	Asp	0	2005	9	12
3340034	N Depot St													
		S Depot St	Adams	Main	0.000	0.062	0.062	Ionia	Urban Coll	Asp	0	2005	5	1
		N Depot St	Main	Washington	0.062	0.126	0.064	Ionia	Urban Coll	Asp	0	2005	5	1
0510604	Hudson St													
		Hudson St	Adams	Main	0.070	0.133	0.063	Ionia	Urban Coll	Asp	0	2005	7	6
3340118	Jackson St													
		Jackson St	Jackson	Lincoln	0.000	0.063	0.063	Ionia	Urban Loc	Asp	0	2005	6	4
0503704	N Jackson St													
		S Jackson St	Webber	Railroad	0.000	0.054	0.054	Ionia	Urban Coll	Asp	0	2005	9	13
		S Jackson St	Railroad	Railroad	0.054	0.122	0.068	Ionia	Urban Coll	Asp	0	2005	9	13
		S Jackson St	Railroad	Adams	0.122	0.151	0.029	Ionia	Urban Coll	Asp	0	2005	9	13
		S Jackson St	Adams	Main	0.151	0.214	0.063	Ionia	Urban Coll	Asp	0	2005	7	5
		N Jackson St	Main	Washington	0.214	0.277	0.063	Ionia	Urban Coll	Asp	0	2005	6	4
		N Jackson St	Washington	Lafayette	0.277	0.339	0.062	Ionia	Urban Coll	Asp	0	2005	5	2
		N Jackson St	Lafayette	Bliss	0.339	0.422	0.083	Ionia	Urban Coll	Asp	0	2005	7	7



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0503706	N Jefferson St	N Jackson St	Bliss	Jackson	0.422	0.446	0.024	Ionia	Urban Coll	Asp	0	2005	7	7
		N Jackson St	Jackson	Lincoln	0.446	0.497	0.051	Ionia	Urban Coll	Asp	0	2005	7	7
		N Jefferson St	Main	Washington	0.279	0.343	0.064	Ionia	Urban Coll	Asp	0	2005	7	6
		N Jefferson St	Washington	Lafayette	0.343	0.405	0.062	Ionia	Urban Coll	Asp	0	2005	7	6
		N Jefferson St	Lafayette	Bliss	0.405	0.489	0.084	Ionia	Urban Coll	Comp	0	2005	7	6
		N Jefferson St	Bliss	Lincoln	0.489	0.549	0.060	Ionia	Urban Coll	Comp	0	2005	7	6
		N Jefferson St	Lincoln	Jones	0.549	0.639	0.090	Ionia	Urban Coll	Asp	0	2005	7	6
		N Jefferson St	Jones	Allen	0.639	0.759	0.120	Ionia	Urban Coll	Asp	0	2005	7	6
3340035	Kidd St	N Jefferson St	Allen	Fargo	0.759	0.799	0.040	Ionia	Urban Coll	Asp	0	2005	7	6
		Kidd St	Adams	Main	0.000	0.064	0.064	Ionia	Urban Coll	Asp	0	2005	5	1
		Kidd St	Main	Washington	0.064	0.125	0.061	Ionia	Urban Coll	Asp	0	2005	5	1
0510102	Library Ct													
0509805	E Main St	Library Ct	Main	Washington	0.000	0.062	0.062	Ionia	Urban Coll	Asp	0	2005	7	5
		W Main St	Vanderheyden	Yeomans	3.052	3.324	0.272	Ionia	Urban Coll	Asp	0	2005	8	11
		W Main St	Yeomans	Adams	3.324	3.454	0.130	Ionia	Urban Coll	Asp	0	2005	8	10
		W Main St	Adams	Kimball	3.454	3.537	0.083	Ionia	Urban Coll	Asp	0	2005	8	9
		W Main St	Kimball	Dexter	3.537	3.614	0.077	Ionia	Urban Coll	Asp	0	2005	8	9
		W Main St	Dexter	Steele	3.614	3.731	0.117	Ionia	Urban Coll	Br	0	2005	9	9
		W Main St	Steele	Depot	3.731	3.845	0.114	Ionia	Urban Coll	Br	0	2005	9	9
		W Main St	Depot	Kidd	3.845	3.919	0.074	Ionia	Urban Coll	Br	0	2005	9	9
		W Main St	Kidd	Hudson	3.919	3.969	0.050	Ionia	Urban Coll	Br	0	2005	9	9
		E Main St	Hudson	Library	3.969	4.008	0.039	Ionia	Urban Coll	Br	0	2005	7	4
		E Main St	Library	Church	4.008	4.029	0.021	Ionia	Urban Coll	Br	0	2005	7	4
		E Main St	Church	Rich	4.029	4.132	0.103	Ionia	Urban Coll	Br	0	2005	7	4
		E Main St	Rich	Ellis	4.132	4.227	0.095	Ionia	Urban Coll	Br	0	2005	7	4
		E Main St	Ellis	Jackson	4.227	4.297	0.070	Ionia	Urban Coll	Br	0	2005	7	4
		E Main St	Jackson	Jefferson	4.297	4.412	0.115	Ionia	Urban Coll	Br	0	2005	7	4
		E Main St	Jefferson	Stevenson	4.412	4.475	0.063	Ionia	Urban Coll	Br	0	2005	7	4
		E Main St	Stevenson	Mill	4.475	4.548	0.073	Ionia	Urban Coll	Asp	0	2005	8	12
		E Main St	Mill	Cleveland	4.548	4.814	0.266	Ionia	Urban Coll	Asp	0	2005	8	12
		E Main St	Cleveland	City/Twp Line	4.814	4.924	0.110	Ionia	Urban Coll	Asp	0	2005	8	12
0510603	Mill St													
		Mill St			0.128	0.166	0.038	Ionia	Urban Coll	Asp	0	2005	4	-1
		Mill St	Bayard	Harrison	0.166	0.225	0.059	Ionia	Urban Coll	Asp	0	2005	4	-1



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0503708	Morse St	Mill St	Harrison	Blanchard	0.225	0.276	0.051	Ionia	Urban Coll	Asp	0	2005	4	-1
		Mill St	Blanchard	Main	0.276	0.342	0.066	Ionia	Urban Coll	Asp	0	2005	4	-1
		Morse St	Washington	Lafayette	0.000	0.065	0.065	Ionia	Urban Coll	Asp	0	2005	5	2
		Morse St	Lafayette	Benton	0.065	0.127	0.062	Ionia	Urban Coll	Asp	0	2005	5	1
		Morse St	Benton	Lincoln	0.127	0.177	0.050	Ionia	Urban Coll	Asp	0	2005	5	0
		Morse St	Lincoln	Jones	0.177	0.264	0.087	Ionia	Urban Loc	Asp	0	2005	9	12
		Morse St	Jones	Prospect	0.264	0.321	0.057	Ionia	Urban Loc	Asp	0	2005	9	12
0503507	Rice St	Morse St	Prospect	Allen	0.321	0.389	0.068	Ionia	Urban Loc	Asp	0	2005	9	12
		Rice St	Yeomans	Hackett	0.000	0.053	0.053	Ionia	Urban Coll	Asp	0	2005	9	13
		Rice St	Hackett	Lincoln	0.053	0.248	0.195	Ionia	Urban Coll	Asp	0	2005	9	13
0503603	Steele St	Steele St	Dexter	Brown	0.000	0.263	0.263	Ionia	Urban Coll	Asp	0	2005	8	11
		Steele St	Brown	Adams	0.263	0.560	0.297	Ionia	Urban Coll	Asp	0	2005	8	11
		Steele St	Adams	Main	0.560	0.622	0.062	Ionia	Urban Coll	Asp	0	2005	8	11
		Steele St	Main	Washington	0.622	0.681	0.059	Ionia	Urban Coll	Asp	0	2005	8	11
0503609	Union St	Union St	Washington	Lafayette	0.000	0.062	0.062	Ionia	Urban Loc	Conc	0	2005	6	5
		Union St	Lafayette	High	0.062	0.085	0.023	Ionia	Urban Loc	Conc	0	2005	6	5
		Union St	High	Summit	0.085	0.147	0.062	Ionia	Urban Loc	Conc	0	2005	6	5
		Union St	Summit	Tower	0.147	0.207	0.060	Ionia	Urban Loc	Asp	0	2005	5	0
		Union St	Tower	Lincoln	0.207	0.262	0.055	Ionia	Urban Loc	Asp	0	2005	4	0
0504903	E Washington St	W Washington St	Dexter	Dye	0.436	0.501	0.065	Ionia	Urban Coll	Asp	0	2005	7	6
		W Washington St	Dye	Steele	0.501	0.563	0.062	Ionia	Urban Coll	Asp	0	2005	7	6
		W Washington St	Steele	Depot	0.563	0.670	0.107	Ionia	Urban Coll	Asp	0	2005	7	6
		W Washington St	Depot	Pleasant	0.670	0.714	0.044	Ionia	Urban Coll	Asp	0	2005	7	6
		W Washington St	Pleasant	Kidd	0.714	0.754	0.040	Ionia	Urban Coll	Asp	0	2005	7	6
		W Washington St	Kidd	Union	0.754	0.803	0.049	Ionia	Urban Coll	Asp	0	2005	7	6
		E Washington St	Union	Library	0.803	0.842	0.039	Ionia	Urban Coll	Asp	0	2005	7	6
		E Washington St	Library	Rich	0.842	0.963	0.121	Ionia	Urban Coll	Asp	0	2005	7	6
		E Washington St	Rich	Jackson	0.963	1.130	0.167	Ionia	Urban Coll	Asp	0	2005	7	6
		E Washington St	Jackson	Jefferson	1.130	1.252	0.122	Ionia	Urban Coll	Asp	0	2005	7	6
		E Washington St	Jefferson	Wager	1.252	1.330	0.078	Ionia	Urban Coll	Asp	0	2005	5	0
		E Washington St	Wager	Morse	1.330	1.508	0.178	Ionia	Urban Coll	Asp	0	2005	5	2
1868103	Yeomans St													



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
		Yeomans St	City/Twp Line	Rice	1.041	1.125	0.084	Ionia	Urban Coll	Asp	0	2005	3	-5
		Yeomans St	Rice	Washington	1.125	1.238	0.113	Ionia	Urban Coll	Asp	0	2005	6	4
		Yeomans St	Washington	Main	1.238	1.312	0.074	Ionia	Urban Coll	Asp	0	2005	6	4
<b>Legal System = 5 City Minor</b>														
0504901	E Adams St	E Adams St	Jackson	Jefferson	0.691	0.802	0.111	Ionia	Urban Loc	Asp	0	2005	7	6
0510808	Allen St	Allen St	Jefferson	Batson	0.000	0.114	0.114	Ionia	Urban Loc	Asp	0	2005	5	0
		Allen St	Batson	Bagley	0.114	0.183	0.069	Ionia	Urban Loc	Asp	0	2005	5	0
		Allen St	Bagley	Morse	0.183	0.253	0.070	Ionia	Urban Loc	Asp	0	2005	5	0
3340817	Apple Tree Ln	Apple Tree Ln	North		0.000	0.442	0.442	Ionia	Urban Loc	Asp	0	2005	7	10
0510809	Bagley St	Bagley St	Jones	Allen	0.000	0.122	0.122	Ionia	Urban Loc	Asp	0	2005	4	-2
0503604	Baldie St	Baldie St	High	Stivens	0.000	0.064	0.064	Ionia	Urban Loc	Asp	0	2005	6	5
		Baldie St	Stivens	Lincoln	0.064	0.229	0.165	Ionia	Urban Loc	Asp	0	2005	6	3
0510806	Batson Ct	Batson Ct	Jones	Allen	0.000	0.121	0.121	Ionia	Urban Loc	Asp	0	2005	4	-2
3340832	Bayard St	Bayard St	Mill	Brown	0.000	0.124	0.124	Ionia	Urban Loc	Asp	0	2005	4	-1
		Bayard St	Brown	Silver	0.124	0.212	0.088	Ionia	Urban Loc	Asp	0	2005	4	-2
		Bayard St	Silver	Cleveland	0.212	0.263	0.051	Ionia	Urban Loc	Asp	0	2005	4	-1
0510810	Benton Ct	Benton Ct	Morse	Johnson	0.000	0.101	0.101	Ionia	Urban Loc	Asp	0	2005	5	0
3340117	Bliss St	Bliss St	Jackson	Jefferson	0.000	0.136	0.136	Ionia	Urban Loc	Asp	0	2005	4	-2
0504104	Branch St	Branch St		Brooks	0.000	0.068	0.068	Ionia	Urban Loc	Asp	0	2005	6	3
		Branch St	Brooks	King	0.068	0.136	0.068	Ionia	Urban Loc	Asp	0	2005	6	3
		Branch St	King	State	0.136	0.223	0.087	Ionia	Urban Loc	Asp	0	2005	6	3
0503508	Brooks Rd	Brooks Rd	Lincoln	Branch	0.000	0.098	0.098	Ionia	Urban Loc	Asp	0	2005	4	-2
3340820	Brown Blvd	Brown Blvd	Dexter	Nash	0.000	0.092	0.092	Ionia	Urban Loc	Asp	0	2005	7	6



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0510607	Brown St	Brown Blvd	Nash	Steele	0.092	0.163	0.071	Ionia	Urban Loc	Asp	0	2005	7	6
		Brown St		Bayard	0.021	0.060	0.039	Ionia	Urban Loc	Asp	0	2005	4	-1
		Brown St	Bayard	Harrison	0.060	0.130	0.070	Ionia	Urban Loc	Asp	0	2005	4	-1
0503605	Center St	Center St	High	Stivens	0.000	0.054	0.054	Ionia	Urban Loc	Asp	0	2005	6	5
		Center St	Stivens	Lincoln	0.054	0.213	0.159	Ionia	Urban Loc	Asp	0	2005	6	5
		Chapman St	Kaiser	King	0.000	0.136	0.136	Ionia	Urban Loc	Asp	0	2005	7	7
0504106	Chapman St	Chapman St	King	State	0.136	0.223	0.087	Ionia	Urban Loc	Asp	0	2005	7	7
		Colby St	Railroad	Colby	0.000	0.078	0.078	Ionia	Urban Loc	Asp	0	2005	6	4
		Colby St	Webber		0.000	0.020	0.020	Ionia	Urban Loc	Asp	0	2005	6	4
0510516	Colby St	Colby St												
		Colby St												
		Colby St												
3340831	Colby St	Colby St												
		Colby St												
		Colby St												
0510903	Crawford St	Crawford St	Prospect		0.000	0.094	0.094	Ionia	Urban Loc	Asp	0	2005	4	-3
		Cyrus St	Lincoln	Lytle	0.000	0.062	0.062	Ionia	Urban Loc	Asp	0	2005	6	3
		Cyrus St	Lytle	Forest	0.062	0.148	0.086	Ionia	Urban Loc	Asp	0	2005	6	3
0503606	Cyrus St	Cyrus St	Forest	Fargo	0.148	0.268	0.120	Ionia	Urban Loc	Asp	0	2005	6	3
		Davis Ct	Lafayette		0.000	0.037	0.037	Ionia	Urban Loc	Asp	0	2005	4	-1
		Davis Ct												
0510706	Davis Ct	Davis Ct												
		Davis Ct												
		Davis Ct												
0510710	N Dexter St	N Dexter St												
		N Dexter St												
		N Dexter St												
3340778	N Dexter St	N Dexter St												
		N Dexter St												
		N Dexter St												
0503703	Division St	Division St												
		Division St												
		Division St												
0510703	Division St	Division St												
		Division St												
		Division St												
0510707	Division St	Division St												
		Division St												
		Division St												
0510009	Dye St	Dye St												
		Dye St												
		Dye St												



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0510701	E Fargo St	E Fargo St	Union	Townsend	0.000	0.095	0.095	Ionia	Urban Loc	Asp	0	2005	4	-3
		E Fargo St	Townsend	Rich	0.095	0.179	0.084	Ionia	Urban Loc	Asp	0	2005	4	-3
		E Fargo St	Rich	Division	0.179	0.265	0.086	Ionia	Urban Loc	Asp	0	2005	4	-3
		E Fargo St	Division	Ridgewood	0.265	0.276	0.011	Ionia	Urban Loc	Asp	0	2005	4	-3
		E Fargo St	Ridgewood	Jackson	0.276	0.338	0.062	Ionia	Urban Loc	Asp	0	2005	3	-3
		E Fargo St	Jackson	Jefferson	0.338	0.473	0.135	Ionia	Urban Loc	Asp	0	2005	3	-3
0504107	W Fargo St	W Fargo St	Kaiser	King	0.000	0.135	0.135	Ionia	Urban Loc	Asp	0	2005	6	3
		W Fargo St	King	State	0.135	0.223	0.088	Ionia	Urban Loc	Asp	0	2005	6	3
		W Fargo St	State	Roselawn	0.223	0.288	0.065	Ionia	Urban Loc	Asp	0	2005	6	3
		W Fargo St	Roselawn		0.288	0.352	0.064	Ionia	Urban Loc	Asp	0	2005	6	3
0510104	Forest Hill Ave	Forest Hill Ave	Park	Washington	0.000	0.053	0.053	Ionia	Urban Loc	Asp	0	2005	7	6
0504105	Forest St	Forest St	Kaiser	King	0.000	0.136	0.136	Ionia	Urban Loc	Asp	0	2005	5	2
		Forest St	King	State	0.136	0.225	0.089	Ionia	Urban Loc	Asp	0	2005	5	2
		Forest St	State	Roselawn	0.225	0.288	0.063	Ionia	Urban Loc	Asp	0	2005	6	3
		Forest St	Roselawn	Hall	0.288	0.397	0.109	Ionia	Urban Loc	Asp	0	2005	5	2
		Forest St	Hall	Dexter	0.397	0.442	0.045	Ionia	Urban Loc	Asp	0	2005	6	3
		Forest St	Dexter	Lawton	0.442	0.507	0.065	Ionia	Urban Loc	Asp	0	2005	6	3
		Forest St	Lawton	Louisa	0.507	0.567	0.060	Ionia	Urban Loc	Asp	0	2005	6	3
		Forest St	Louisa	Cyrus	0.567	0.638	0.071	Ionia	Urban Loc	Asp	0	2005	6	3
3340548	Gregmark Ln	Gregmark Ln	Morse		0.000	0.223	0.223	Ionia	Urban Loc	Asp	0	2005	6	4
0509901	Hackett St	Hackett St	City/Twp Line	Rice	0.244	0.325	0.081	Ionia	Urban Loc	Asp	0	2005	6	3
		Hackett St	Rice	King	0.325	0.407	0.082	Ionia	Urban Loc	Asp	0	2005	6	3
		Hackett St	King	King	0.407	0.425	0.018	Ionia	Urban Loc	Asp	0	2005	6	3
		Hackett St	King	State	0.425	0.495	0.070	Ionia	Urban Loc	Asp	0	2005	6	3
		Hackett St	State	Taylor	0.495	0.560	0.065	Ionia	Urban Loc	Asp	0	2005	6	3
		Hackett St	Taylor	Harter	0.560	0.613	0.053	Ionia	Urban Loc	Asp	0	2005	6	3
0503602	Hall St	Hall St	Lincoln	Forest	0.000	0.146	0.146	Ionia	Urban Loc	Asp	0	2005	6	3
0507403	Harrison St	Harrison St	Mill	Brown	0.000	0.120	0.120	Ionia	Urban Loc	Asp	0	2005	4	-2
		Harrison St	Brown	Cleveland	0.120	0.264	0.144	Ionia	Urban Loc	Asp	0	2005	4	-2



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0503601	Harter St	Harrison St	Cleveland		0.264	0.364	0.100	Ionia	Urban Loc	Asp	0	2005	8	10
		Harter St	High	Hackett	0.000	0.051	0.051	Ionia	Urban Loc	Asp	0	2005	6	4
		Harter St	Hackett	Lincoln	0.051	0.248	0.197	Ionia	Urban Loc	Asp	0	2005	6	3
0504904	High St													
		High St	Bradford	Kimball	0.000	0.033	0.033	Ionia	Urban Loc	Asp	0	2005	6	3
		High St	Kimball	Dexter	0.033	0.083	0.050	Ionia	Urban Loc	Asp	0	2005	6	3
		High St	Dexter	Dye	0.083	0.163	0.080	Ionia	Urban Loc	Asp	0	2005	6	3
		High St	Dye	Baldie	0.163	0.185	0.022	Ionia	Urban Loc	Asp	0	2005	6	3
		High St	Baldie	Center	0.185	0.283	0.098	Ionia	Urban Loc	Asp	0	2005	6	5
		High St	Center	Amphlett	0.283	0.307	0.024	Ionia	Urban Loc	Asp	0	2005	6	3
		High St	Amphlett	Pleasant	0.307	0.371	0.064	Ionia	Urban Loc	Asp	0	2005	6	5
		High St	Pleasant	Union	0.371	0.465	0.094	Ionia	Urban Loc	Asp	0	2005	6	3
0510906	Highland Dr													
		Highland Dr	Melody	Sky View	0.000	0.096	0.096	Ionia	Urban Loc	Asp	0	2005	5	0
0510604	Hudson St													
		Hudson St	Railroad	Adams	0.000	0.070	0.070	Ionia	Urban Loc	Asp	0	2005	7	6
0503704	N Jackson St													
		N Jackson St	Lincoln	Fargo	0.497	0.747	0.250	Ionia	Urban Loc	Asp	0	2005	7	7
0503706	N Jefferson St													
		S Jefferson St	Webber	Webber	0.014	0.050	0.036	Ionia	Urban Loc	Asp	0	2005	3	-7
		S Jefferson St	Webber	Railroad	0.050	0.155	0.105	Ionia	Urban Loc	Asp	0	2005	3	-3
		S Jefferson St	Railroad	Adams	0.155	0.217	0.062	Ionia	Urban Loc	Asp	0	2005	3	-3
		S Jefferson St	Adams	Main	0.217	0.279	0.062	Ionia	Urban Loc	Asp	0	2005	3	-3
0503709	Johnson St													
		Johnson St	Lafayette	Benton	0.000	0.055	0.055	Ionia	Urban Loc	Asp	0	2005	6	4
		Johnson St	Benton	Lincoln	0.055	0.101	0.046	Ionia	Urban Loc	Asp	0	2005	4	-2
		Johnson St	Lincoln	Jones	0.101	0.189	0.088	Ionia	Urban Loc	Asp	0	2005	4	-2
		Johnson St	Jones	Prospect	0.189	0.244	0.055	Ionia	Urban Loc	Asp	0	2005	4	-1
		Johnson St	Prospect		0.244	0.296	0.052	Ionia	Urban Loc	Asp	0	2005	7	5
0510807	Jones St													
		Jones St	Jefferson	Batson	0.000	0.114	0.114	Ionia	Urban Loc	Asp	0	2005	9	12
		Jones St	Batson	Bagley	0.114	0.184	0.070	Ionia	Urban Loc	Asp	0	2005	9	12
		Jones St	Bagley	Morse	0.184	0.253	0.069	Ionia	Urban Loc	Asp	0	2005	9	12
		Jones St	Morse	Johnson	0.253	0.351	0.098	Ionia	Urban Loc	Asp	0	2005	4	-3
		Jones St	Johnson		0.351	0.537	0.186	Ionia	Urban Loc	Asp	0	2005	4	-3
0510708	Kaiser St													



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0503509	King St	Kaiser St	Forest	Chapman	0.000	0.054	0.054	Ionia	Urban Loc	Asp	0	2005	7	7
		Kaiser St	Chapman	Fargo	0.054	0.105	0.051	Ionia	Urban Loc	Asp	0	2005	7	7
		King St	Hackett	Lincoln	0.000	0.195	0.195	Ionia	Urban Loc	Asp	0	2005	6	3
		King St	Lincoln	Branch	0.195	0.292	0.097	Ionia	Urban Loc	Asp	0	2005	7	6
		King St	Branch	Forest	0.292	0.344	0.052	Ionia	Urban Loc	Asp	0	2005	6	3
		King St	Forest	Chapman	0.344	0.395	0.051	Ionia	Urban Loc	Asp	0	2005	6	3
		King St	Chapman	Fargo	0.395	0.448	0.053	Ionia	Urban Loc	Asp	0	2005	6	3
0504103	King St	King St	Washington	Hackett	0.000	0.132	0.132	Ionia	Urban Loc	Conc	0	2005	6	5
0510610	Lafayette St	Lafayette St	Union	Davis	0.000	0.080	0.080	Ionia	Urban Loc	Asp	0	2005	4	-2
		Lafayette St	Davis	Rich	0.080	0.162	0.082	Ionia	Urban Loc	Asp	0	2005	4	-2
		Lafayette St	Rich	Division	0.162	0.234	0.072	Ionia	Urban Loc	Asp	0	2005	4	-1
		Lafayette St	Division	Jackson	0.234	0.327	0.093	Ionia	Urban Loc	Asp	0	2005	4	-1
		Lafayette St	Jackson	Jefferson	0.327	0.455	0.128	Ionia	Urban Loc	Asp	0	2005	4	-1
		Lafayette St	Jefferson	Pearl	0.455	0.652	0.197	Ionia	Urban Loc	Asp	0	2005	4	0
		Lafayette St	Pearl	Morse	0.652	0.710	0.058	Ionia	Urban Loc	Asp	0	2005	4	-1
		Lafayette St	Morse	Johnson	0.710	0.809	0.099	Ionia	Urban Loc	Asp	0	2005	4	-1
		Lafayette St	Johnson	Stevenson	0.809	0.868	0.059	Ionia	Urban Loc	Asp	0	2005	4	-2
		Lafayette St	Stevenson	Lovell	0.868	0.929	0.061	Ionia	Urban Loc	Asp	0	2005	4	-2
0510004	Lawton St	Lawton St	Forest	Fargo	0.000	0.105	0.105	Ionia	Urban Loc	Asp	0	2005	6	3
0510005	Louisa St	Louisa St		Forest	0.000	0.043	0.043	Ionia	Urban Loc	Asp	0	2005	6	4
		Louisa St	Forest	City/Twp Line	0.043	0.151	0.108	Ionia	Urban Loc	Asp	0	2005	6	3
		Louisa St												
0503702	Lovell Ct	Lovell Ct	Terrace	Lincoln	0.000	0.135	0.135	Ionia	Urban Loc	Asp	0	2005	6	4
0503801	Lovell St	Lovell St	Washington	Lafayette	0.000	0.051	0.051	Ionia	Urban Loc	Asp	0	2005	4	-2
		Lovell St	Lafayette	Lafayette	0.051	0.062	0.011	Ionia	Urban Loc	Asp	0	2005	4	-2
		Lovell St	Lafayette	Lincoln	0.062	0.148	0.086	Ionia	Urban Loc	Asp	0	2005	4	-2
3340114	E Lytle St	E Lytle St	Union	Townsend	0.000	0.095	0.095	Ionia	Urban Loc	Asp	0	2005	6	3
		E Lytle St	Townsend		0.095	0.136	0.041	Ionia	Urban Loc	Asp	0	2005	6	3
0510007	W Lytle St	W Lytle St	Cyrus	Pleasant	0.000	0.075	0.075	Ionia	Urban Loc	Asp	0	2005	4	-1



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0510902	Maple Rd	W Lytle St	Pleasant	Union	0.075	0.150	0.075	Ionia	Urban Loc	Asp	0	2005	6	3
		Maple Rd	Oak	City/Twp Line	0.000	0.059	0.059	Ionia	Urban Loc	Asp	0	2005	6	4
0504102	Marshall Ct	Marshall Ct	State		0.000	0.053	0.053	Ionia	Urban Loc	Asp	0	2005	6	4
0510904	Melody Ln	Melody Ln	View	Prospect	0.000	0.035	0.035	Ionia	Urban Loc	Asp	0	2005	5	0
		Melody Ln	Prospect	Highland	0.035	0.070	0.035	Ionia	Urban Loc	Asp	0	2005	5	0
0510603	Mill St	Mill St	Webber	Bayard	0.124	0.128	0.004	Ionia	Urban Loc	Asp	0	2004	4	-1
0503708	Morse St	Morse St	Allen	City/Twp Line	0.389	0.429	0.040	Ionia	Urban Loc	Asp	0	2005	9	12
		Nash Ct	Brown		0.000	0.122	0.122	Ionia	Urban Loc	Asp	0	2005	7	6
3340821	Nash Ct	Nash Ct	Brown		0.000	0.122	0.122	Ionia	Urban Loc	Asp	0	2005	7	6
3340044	Oak St	Oak St	Washington	Maple	0.000	0.056	0.056	Ionia	Urban Loc	Asp	0	2005	6	4
		Oakwood Ct	Ridgewood		0.000	0.048	0.048	Ionia	Urban Loc	Asp	0	2005	1	-20
3340829	Oakwood Ct	Oakwood Ct	Ridgewood		0.000	0.048	0.048	Ionia	Urban Loc	Asp	0	2005	1	-20
3340547	Oakwood Dr	Oakwood Dr	Ridgewood		0.000	0.061	0.061	Ionia	Urban Loc	Asp	0	2005	2	-8
0510105	Park St	Park St	Forest Hill		0.000	0.049	0.049	Ionia	Urban Loc	Asp	0	2005	4	-1
		Forest Hill Ave		Washington	0.049	0.169	0.120	Ionia	Urban Loc	Asp	0	2005	4	-1
0503707	Pearl St	Pearl St	Lafayette	Lincoln	0.000	0.121	0.121	Ionia	Urban Loc	Asp	0	2005	5	1
0503607	Pleasant St	Pleasant St	Washington	Amphlett	0.000	0.030	0.030	Ionia	Urban Loc	Asp	0	2005	4	-2
		Pleasant St	Amphlett	High	0.030	0.086	0.056	Ionia	Urban Loc	Asp	0	2003	2	-8
		Pleasant St	High	Yeomans	0.086	0.114	0.028	Ionia	Urban Loc	Asp	0	2005	6	4
		Pleasant St	Yeomans	Summit	0.114	0.149	0.035	Ionia	Urban Loc	Asp	0	2005	5	1
		Pleasant St	Summit	Tower	0.149	0.213	0.064	Ionia	Urban Loc	Asp	0	2005	5	1
		Pleasant St	Tower	Lincoln	0.213	0.274	0.061	Ionia	Urban Loc	Asp	0	2005	6	4
0503608	Pleasant St	Pleasant St	Lincoln	Lytle	0.000	0.063	0.063	Ionia	Urban Loc	Asp	0	2005	4	-1
0510907	Prairie View Dr	Prairie View Dr	Sky View	City/Twp Line	0.000	0.051	0.051	Ionia	Urban Loc	Asp	0	2005	5	1
0510901	Prospect St													



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0510508	Railroad St	Prospect St	Morse	Johnson	0.000	0.102	0.102	Ionia	Urban Loc	Asp	0	2005	3	-3
		Prospect St	Johnson	Robertson	0.102	0.156	0.054	Ionia	Urban Loc	Asp	0	2005	4	-3
		Prospect St	Robertson	Crawford	0.156	0.223	0.067	Ionia	Urban Loc	Asp	0	2005	3	-3
		Prospect St	Crawford	Melody	0.223	0.353	0.130	Ionia	Urban Loc	Asp	0	2005	1	-18
		Railroad St	Hudson	Colby	0.000	0.084	0.084	Ionia	Urban Loc	Asp	0	2005	7	6
		Railroad St	Colby	Wellton	0.084	0.142	0.058	Ionia	Urban Loc	Asp	0	2005	7	6
		Railroad St	Wellton	DeQuack	0.142	0.222	0.080	Ionia	Urban Loc	Asp	0	2005	7	8
		Railroad St	DeQuack	Jackson	0.222	0.333	0.111	Ionia	Urban Loc	Asp	0	2005	7	7
0510605	Railroad St	Railroad St	Jackson	Garrity	0.000	0.048	0.048	Ionia	Urban Loc	Asp	0	2005	3	-4
		Railroad St	Garrity	Jefferson	0.048	0.110	0.062	Ionia	Urban Loc	Asp	0	2005	3	-4
0503701	Rich St	Rich St	Main	Washington	0.000	0.061	0.061	Ionia	Urban Loc	Asp	0	2005	5	1
		Rich St	Washington	Lafayette	0.061	0.124	0.063	Ionia	Urban Loc	Asp	0	2005	4	-3
		Rich St	Lafayette	Terrace	0.124	0.162	0.038	Ionia	Urban Loc	Asp	0	2005	4	-3
		Rich St	Terrace	Summit	0.162	0.221	0.059	Ionia	Urban Loc	Asp	0	2005	4	-3
		Rich St	Summit	Lincoln	0.221	0.301	0.080	Ionia	Urban Loc	Asp	0	2005	4	-3
		Rich St	Lincoln	Fargo	0.301	0.551	0.250	Ionia	Urban Loc	Asp	0	2005	6	4
0510805	Ridgewood Ct	Ridgewood Ct	Ridgewood		0.000	0.103	0.103	Ionia	Urban Loc	Asp	0	2005	4	-1
0510803	Ridgewood Dr	Ridgewood Dr	Fargo	Ridgewood	0.000	0.128	0.128	Ionia	Urban Loc	Asp	0	2005	4	-2
		Ridgewood Dr	Ridgewood	Oakwood	0.128	0.211	0.083	Ionia	Urban Loc	Asp	0	2005	4	-2
		Ridgewood Dr	Oakwood	Oakwood	0.211	0.221	0.010	Ionia	Urban Loc	Asp	0	2005	4	-2
		Ridgewood Dr	Oakwood		0.221	0.280	0.059	Ionia	Urban Loc	Asp	0	2005	4	-2
0510709	Roselawn Dr	Roselawn Dr	Forest	Fargo	0.000	0.109	0.109	Ionia	Urban Loc	Asp	0	2005	6	3
0510618	Silver St	Silver St	Bayard		0.000	0.037	0.037	Ionia	Urban Loc	Asp	0	2005	4	-1
0503802	Sky View Dr	Sky View Dr	Lincoln	View	0.000	0.146	0.146	Ionia	Urban Loc	Asp	0	2005	5	1
		Sky View Dr	View	Prairie View	0.146	0.181	0.035	Ionia	Urban Loc	Asp	0	2005	5	1
		Sky View Dr	Prairie View	Sky View	0.181	0.218	0.037	Ionia	Urban Loc	Asp	0	2005	5	1
3340549	Sky View Dr	Sky View Dr	Sky View	Sky View	0.000	0.067	0.067	Ionia	Urban Loc	Asp	0	2005	8	10
3340046	Sky View Trl													



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
3340550	Sky View Trl	Sky View Trl	Sky View		0.000	0.038	0.038	Ionia	Urban Loc	Asp	0	2005	8	10
		Sky View Trl	Sky View	Whitetail	0.000	0.203	0.203	Ionia	Urban Loc	Asp	0	2005	8	10
		Sky View Trl	Whitetail		0.203	0.471	0.268	Ionia	Urban Loc	Asp	0	2005	8	10
0503510	N State Rd													
		N State Rd	Marshall	Hackett	0.000	0.083	0.083	Ionia	Urban Loc	Asp	0	2005	6	3
		N State Rd	Hackett	Lincoln	0.083	0.277	0.194	Ionia	Urban Loc	Asp	0	2005	6	3
0510609	Stevenson Pl	Stevenson Pl	Main		0.000	0.089	0.089	Ionia	Urban Loc	Asp	0	2005	7	5
0503710	Stevenson St													
		Stevenson St	Washington	Lafayette	0.000	0.065	0.065	Ionia	Urban Loc	Asp	0	2005	5	0
		Stevenson St	Lafayette	Lincoln	0.065	0.157	0.092	Ionia	Urban Loc	Asp	0	2005	5	0
0510801	Stivens St	Stivens St	Baldie	Center	0.000	0.095	0.095	Ionia	Urban Loc	Asp	0	2005	5	1
0510704	Summit St													
		Summit St	Pleasant	Union	0.000	0.093	0.093	Ionia	Urban Loc	Asp	0	2005	6	4
		Summit St	Union	Rich	0.093	0.262	0.169	Ionia	Urban Loc	Asp	0	2005	5	1
0509902	Taylor Ct	Taylor Ct	Hackett		0.000	0.092	0.092	Ionia	Urban Loc	Asp	0	2005	6	3
0510802	Tower St	Tower St	Pleasant	Union	0.000	0.092	0.092	Ionia	Urban Loc	Asp	0	2005	6	3
0503610	Townsend St													
		Townsend St	Lincoln	Lytle	0.000	0.076	0.076	Ionia	Urban Loc	Asp	0	2005	6	3
		Townsend St	Lytle	Fargo	0.076	0.251	0.175	Ionia	Urban Loc	Asp	0	2005	6	3
0503609	Union St													
		Union St	Lincoln	Lytle	0.262	0.322	0.060	Ionia	Urban Loc	Asp	0	2005	2	-11
		Union St	Lytle	Lytle	0.322	0.338	0.016	Ionia	Urban Loc	Asp	0	2005	5	1
0510905	S View Dr													
		Union St	Lytle	Fargo	0.338	0.511	0.173	Ionia	Urban Loc	Asp	0	2005	5	1
		South View Dr	Melody	Sky View	0.000	0.095	0.095	Ionia	Urban Loc	Asp	0	2005	5	0
0510103	Wager Pl	Wager Pl		Washington	0.000	0.062	0.062	Ionia	Urban Loc	Asp	0	2005	5	0
0504903	E Washington St													
		W Washington St		Yeomans	0.000	0.120	0.120	Ionia	Urban Loc	Conc	0	2005	3	-4
		W Washington St	Yeomans	King	0.120	0.164	0.044	Ionia	Urban Loc	Asp	0	2005	9	13
		W Washington St	King	Kimball	0.164	0.370	0.206	Ionia	Urban Loc	Asp	0	2005	9	13
		W Washington St	Kimball	Dexter	0.370	0.436	0.066	Ionia	Urban Loc	Asp	0	2005	9	13



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
0510507	Webber St	E Washington St	Morse	Forest Hill	1.508	1.543	0.035	Ionia	Urban Loc	Asp	0	2005	5	0
		E Washington St	Forest Hill	Forest Hill	1.543	1.642	0.099	Ionia	Urban Loc	Asp	0	2005	4	-2
		E Washington St	Forest Hill	Stevenson	1.642	1.664	0.022	Ionia	Urban Loc	Asp	0	2005	4	-2
		E Washington St	Stevenson	Oak	1.664	1.699	0.035	Ionia	Urban Loc	Asp	0	2005	4	-2
		E Washington St	Oak	Lovell	1.699	1.728	0.029	Ionia	Urban Loc	Asp	0	2005	4	-2
		E Washington St	Lovell	City/Twp Line	1.728	1.760	0.032	Ionia	Urban Loc	Asp	0	2005	4	-2
0510601	Webber St	Webber St	Colby	Welton	0.000	0.056	0.056	Ionia	Urban Loc	Asp	0	2005	7	6
0510602	Webber St	Webber St	Jackson	Jefferson	0.000	0.087	0.087	Ionia	Urban Loc	Asp	0	2005	3	-3
0504820	Wells St	Webber St	Jefferson	Mill	0.000	0.131	0.131	Ionia	Urban Loc	UE	0	2003	2	-7
0510509	Welton St	Wells St	Dexter		0.000	0.099	0.099	Ionia	Urban Loc	Asp	0	2005	5	1
		Wells St			0.099	0.198	0.099	Ionia	Urban Loc	Asp	0	2005	7	6
		Welton St	Webber	Railroad	0.000	0.077	0.077	Ionia	Urban Loc	Asp	0	2005	7	6
3340551	Whitetail Ct	Whitetail Ct	Sky View		0.000	0.157	0.157	Ionia	Urban Loc	Asp	0	2005	8	10

### Legal System = 9 Not Act51 Certified

3340708	Blanchard Ct	Blanchard Ct	Mill		0.000	0.044	0.044	Ionia	Unk	Asp	0	2005	8	10
3340709	Bradford Ct	Bradford Ct	High		0.000	0.027	0.027	Ionia	Unk	Grav	0	2003	2	-2
0510607	Brown St	Brown St			0.000	0.021	0.021	Ionia	Unk	Asp	0	2005	4	-1
3340714	Church Aly	Church Aly	Adams	Main	0.000	0.063	0.063	Ionia	Unk	Asp	0	2005	7	6
3340718	Dexter Ct	Dexter Ct	Dexter		0.000	0.048	0.048	Ionia	Unk	Grav	0	2003	6	1
3340719	Ellis Aly	Ellis Aly	Adams	Main	0.000	0.063	0.063	Ionia	Unk	Asp	0	2005	4	-2
3340735	Kimball St	Kimball St	Main	Washington	0.000	0.061	0.061	Ionia	Unk	Asp	0	2005	7	5
		Kimball St	Washington	High	0.061	0.121	0.060	Ionia	Unk	Asp	0	2005	7	5



Date: 24-Mar-05

## Road Condition by ACT 51 Legal System

PR Number	Road Name	Segment Name	From Description	To Description	P.O.B.	P.O.E.	Length	City/Township	NFC	Surf Subtype	Last Resurf	Year Eval	PASER Rating	RSL
3340044	Oak St	Oak St	Maple		0.056	0.097	0.041	Ionia	Unk	Asp	0	2005	6	4
0504820	Wells St	Wells St			0.198	0.251	0.053	Ionia	Unk	Asp	0	2005	7	6



## **INVESTMENTS IN THE SYSTEM**

MCL 247.659a(9) requires the State's Asset Management Council to report on the "receipts and disbursements of road and street funds". The language mirrors that in MCL 247.664. This section of Act 51 of the Public Acts of 1951, as amended, requires local road agencies to report to the department on how they spent their road funds during the previous fiscal year. The use of the same language in MCL 247.659a(9) was deliberate. It was intended that the AM Council would be able to use the annual financial reports for the Council's reporting requirements, thus easing the reporting burden on local agencies.

However, in reviewing recent Act 51 reports and the forms local agencies use to file the required information, it was discovered that the data currently being reported does not provide the Council with what it needs. Further, the data reported by city and county agencies is reported differently from the way MDOT reports its expenditures.

The Council needs information related to investments made in the preservation and improvement of pavements and bridges. They also need accurate information on maintenance. Currently, these disbursements are often included in other categories and cannot be deciphered independently. Further, the Council needs the information in such a manner as to be able to determine total expenditures for routine maintenance, capital preventive maintenance, and structural improvements. This cannot be done with the existing reporting forms.

To correct this problem, the Council had two different working groups taking part in developing methods for reporting. The first group worked to group functions under the three categories: Routine Maintenance, Capital Preventative Maintenance, and Structure Improvement. This group reviewed definitions and work items under county road guidelines, MDOT guides, and the Act 51 process.

The second group has been working with the Center for Geographic Information, the Michigan Department of Information Technology. The resulting product will be an on-line internet reporting process for agencies to report capital preventative maintenance work and costs that can then be exported to the annual reporting process. In addition, the work will seek to make all of the information gathering useful in exporting and importing with RoadSOFT.

Investments in the road and bridge system in Michigan are primarily funded through three sources: the Michigan Transportation Fund, federal-aid, and local funds. (Bonding also plays a significant role but is not discussed in this report.)



**For the City of Ionia**, we have compiled historic information from minutes of the City Council that date back to the turn of the century as well as annual department reports.

This compilation has enabled us to determine ages of various parts of the overall asset management process with the data recorded on the City's GIS system. GIS staff have spent a great amount of time establishing data tables that can be easily searched and grouped for analysis purposes.

One of the outcomes has been the studying of where to classify water main replacement. While our initial strategy was to have all lines under 50 years of age, that strategy may be revised in the future to indicate that all water main "shall be ductile iron or plastic." The main concern is that there is cast iron or galvanized pipe in the city's inventory and, more importantly, lead water service connections. It is believed that all lead water services have been removed and all testing by the DPU has shown no levels of concern. When the system rebuilds are complete, this statement can be reclassified to fact but until that time can only be an hypothesis.

Also in the future, the life of sanitary sewer and storm sewer may need adjusting upwards as new construction methods and materials last well beyond the normal 50 year cycle that has been anticipated. With the cleaning cycles and tracking established using the GIS processes and internal controls, the life of these systems can be extended still further with minor problems discovered and repaired prior to them reaching the level of structural improvement.

The reporting method traditionally used by the City for accounting purposes as well as budgeting purposes did not allow the City to track expenditures in the various areas outlined in the Asset Management Strategy.

Routine Maintenance, for instance, was not located under one category but is, instead, spread among several different functions and line items. Preventive maintenance can be found in general street budgets or may, instead, be tracked under "capital projects."

Structural Improvements, meaning roads being rebuilt, are often tracked under capital projects, grant projects, downtown development, or various other accounts.

For an asset management program to allow you to benchmark and evaluate how the assets are being managed, the City Council would



review what was expended in the prior year and in what condition are the assets of the City. The departments would report what is expected to be spent to maintain and improve the assets and the following year the City Council would review to see if improvement is made.

If greater improvement is desired by Council or if the assets are deteriorating in the City, then the City Council should ask “why.” Either enough money is not available to maintain the assets (requiring some type of increase) or the money is being mismanaged. The fiduciary responsibility of the City Council can, therefore, be met.

Budgets are being converted as part of the 2005-2006 city budget process to reflect these desired outcomes.



## **CITY OF IONIA ASSET MANAGEMENT STRATEGY**

Utilizing the matrix provided following this paragraph, the Departments of Public Works and Public Utilities, working with the Department of Information Technology, Department of Finance, and the City Manager's Office have developed the following asset management plan for the City of Ionia. Work has been completed on inventorying signs, street lights, and other objects within the road right-of-way with the data recorded on the City's GIS data system.

That effort will continue during 2005-2006, encompassing trees and sidewalks so as to truly manage the entire assets of the City within rights-of-way.

### **ELEMENTS OF ASSET MANAGEMENT**

The major elements of an asset management system are:

- Establishing goals and objectives through development of a strategic plan,
- Collecting data to measure progress toward achieving the established goals and objectives,
- Using management systems to control the various processes,
- Developing appropriate performance measures,
- Identifying standards and benchmarks,
- Developing alternative analyses procedures,
- Making decisions based on these results and developing an appropriate program,
- Implementing the program,
- Monitoring and reporting results of actions taken.

### **Element 1: Establishing Goals and Objectives through development of a strategic plan.**

- All departments have adopted Mission, Vision, and Values Statements in addition to goals and objectives for each department. The Department Goals and Objectives are supported by Goals and Objectives for individual department heads as well as department employees. All employees of the City are asked to develop goals and objectives as part of their annual review process which are, in turn, supported by short and long-term training programs. New employees are encouraged to create a career training plan when they hire with the City and this becomes part of



the employees permanent file reviewed annually. The Mission, Vision, and Values for the Department of Public Works, Department of Public Utilities, and Management staffs of the City are incorporated as part of this report.

- The Goals and Objectives of each department are also adopted as part of this strategic plan with the Department Head charged with meeting the goals and objectives for his/her department during the 2005-2006 fiscal year.
- During 2005-2006, the Strategic Plans for each department will be aligned to follow the format recently used by the Department of Public Safety so as to report assignments, tasks, completion dates, budget line items, etc. This will enable a report card on a regular basis to determine how the City is meeting its Strategic Plans and gives the public – the investors in the system – a snapshot of their investment.

The Goals and Objectives of the various departments are attached and become a part of this document (found in Appendix Section). The Goals and Objectives have been used to develop the following Strategy for the next five years for the City of Ionia. The strategy will be reviewed annually to determine compliance.



## **City of Ionia Strategy**

### **Standards made for the Assets:**

- Ninety percent (95%) of the roads within the City of Ionia shall be rated at a PASER [5] or higher by July 1, 2006  
UPDATE: This percentage is doable provided the Federal TEA act is reauthorized in 2005.  
GRADE: B+ With projects slated for next two years, all roads should be at PASER 5 or higher.
- Ninety percent (90%) of the water mains within the City of Ionia shall be less than 50 years old by July 1, 2007.  
UPDATE: This percentage may not be achievable by 2007. Because of bonding and funding requirements, it is likely that it will take until 2009 to achieve the 90% rate unless additional state or federal funds become available.  
GRADE: C Based on data found on accompanying tables, 23% of the city's system is 50 years or older which would be a grade of 77%. On the other side, 42% of the system has been rebuilt in the last 10 years with nearly 10% additional planned during the next two years. This would lead to approximately 87% being 50 years or less. As discussed in the report earlier, the goal is to have ductile iron pipe and not cast iron, galvanized, or lead.
- Ninety percent (90%) of the sanitary sewer mains within the City of Ionia shall be less than 50 years of age by July 1, 2007.  
UPDATE: This percentage may be achievable in 2009 as well but depends on the outcome of studies that are currently underway to evaluate conditions of several major collection lines that run between streets. One major line cannot be upgraded until MDOT work takes place in 2008.  
GRADE: C Based on data, similar to water, that shows 23% of the city's system is 50 years or older which would be a percentage of 77%. During the next two years, nearly 15% of this system will be upgraded which would reach the goal. Like water, since 1990 37% of the system has been reconstructed.
- One-hundred percent of the fire hydrants shall be inspected annually.  
UPDATE: Complete and all are logged on the system with name of person inspecting, times, flows, repairs, and other data.  
GRADE: A In addition, tracking on repairs improved and moved to GIS systems.
- Ninety percent (90%) of the storm sewer system in the City of Ionia shall be 50 years of age by July 1, 2009. All portions of the City shall have sufficient storm sewers to handle 10 year events.  
UPDATE: This percentage may be achievable with rebuilds of the city infrastructure. All parts of the City now have storm sewer with one part (Johnson Street north of M-21) identified in the master planning process as needing piping. This work would be dependent on MDOT work on M-21, however.  
GRADE: C At this time 34% of the city's storm sewers are older than 50 years meaning 66% meet the standard. However, considerable work has taken place in upsizing outlets and adding outlets with almost 47% of the system constructed in the last 10 years. Only 19% was constructed or repaired in the intervening periods!

### **Capital Investments in the System:**

- Ninety percent (90%) of the hydrants in the commercial and industrial areas of the City of Ionia shall be fitted with Storz quick-connect couplings by July 1, 2007.  
UPDATE: 85% have been changed; work should be completed in 2005.  
GRADE: B



- One hundred percent of the Main Interceptor Sewers entering the Publicly Owned Treatment Works shall be reconstructed by July 1, 2006.  
UPDATE: Completed in fall of 2004.  
GRADE: A
- One hundred percent (100%) of the major streets within the City of Ionia shall be reconstructed (includes curb, gutter, storm, sanitary, water, and base) by July 1, 2009. The schedule for the investment in major streets is:

2004

West Main Street from Dexter to City limits: repair of sanitary interceptor at Yeomans Street and resurfacing. DONE

Yeomans Street from City limits to West Main Street as part of the Tol development project with new water, sanitary, storm upgrades, surface and curb repair. PROJECT CANCELLED

Rice Street from M-21 to Yeomans Street with new water, sanitary, storm, curb, gutter, and pavement surface DONE

Steele Street from M-66 to Adams Street: new water, curb repairs, surface and base DONE

Jackson Street from Adams Street to Webber Street: new water and surface (no curb and gutter) DONE

2005

Morse Street from M-21 to East Washington Street with new curb, gutter, water, sanitary, and storm AT BID

East Washington Street from City limits to Jefferson Street with new curb, gutter, water, sanitary and storm sewer AT BID

High Street from M-66 to Union Street with new curb, gutter, water, sanitary and storm sewer AT BID

Baldie Street from High Street to M-21 with new curb, gutter, water, sanitary and storm sewer AT BID

Cyrus Street from M-21 to north city limits with new curb, gutter, water, sanitary and storm sewer AT BID

Morse Street from M-21 to East Washington Street with new curb, gutter, water, sanitary and storm sewer. AT BID

East Washington Street from Jefferson Street to Lovell Street with new curb, gutter, sanitary and storm sewer. AT BID

Stevenson Street from East Washington to Lafayette with new curb, gutter, sanitary and storm sewer. AT BID

Oak and Park Streets from East Washington to dead ends with new curb, gutter, sanitary and storm sewer AT BID

M-21 (Lincoln Avenue) from M-66 (Dexter Street) to Nicholson Street with new curb, gutter, water, sanitary and storm sewer WORK STARTED

Highland, Southview, and Skyview Drive full mill, base preparation, grading, and repaving

Ridgewood Drive, Ridgewood Court, and Oakwood Court with full mill, base preparation and grading and paving.

Railroad Street from Jackson Street to Jefferson Street with new water main, full depth mill, base, and paving

Complete repaving of all city-owned parking lots



2006

Stivens Street from Baldie to Center Street with new curb, gutter, water, sanitary and storm sewer

Center Street from M-21 to High Street with new curb, gutter, water, sanitary and storm sewer

Pleasant Street from M-21 to High Street with new curb, gutter, water, sanitary and storm sewer

Summit Street from Pleasant Street to Rich Street with new curb, gutter, water, sanitary and storm sewer

Tower Street from Pleasant Street to Union Street with new curb, gutter, water, sanitary and storm sewer

Mill Street full depth mill, replacement of water main, inspection of sanitary, and full depth paving Mill Street from East Main Street to south end with new surface

Union Street from Washington Street to Lincoln Avenue with diamond grind and joint repair on concrete surface. Inspect water main

Replace 3 buses in the Dial-A-Ride system

2007

State Street from M-21 to south end with new surface and curb-gutter where needed; water

Hackett Street from west city limit to Harter Street with curb and gutter repair, water and surface

Harter Street from M-21 to High Street with new surface, water, sewer, and curb repair

**Budgeting and Accounting/Technology:**

- All budgets shall be converted to three categories: Routine Maintenance, Preventive Maintenance, and Structural Improvement by July 1, 2005 for Road Systems.
- All road signs shall be recorded, inspected, and converted to sign-mount by July 1, 2006.
- All trees shall be inventoried; all hazardous trees shall be removed; and GIS records compiled by July 1, 2007
- All other assets identified in the Road Rights-of-Way shall be recorded by July 1, 2006.
- All publicly owned parking lots, the Grand Rivertrail, and all parks roadways shall be evaluated using the RoadSOFT programs and inventoried on the City's data base system by July 1, 2006.
- All ages of systems shall be reviewed during 2005 with final reports and data used for 2006 Asset Management Report as well as continued projections. DONE
- Review and work shall begin on 2007 projects during 2005.



#### **Maintenance of the Assets**

- One hundred percent of the roads having been reconstructed or repaved since July 1, 2001 shall be inspected and crack-sealed annually. For 2005 the following streets will be inspected and crack sealed:  
Chapman Street, Kaiser Street, Fargo Street, Branch Street, King Street, Brooks Street, Forest Street, Lawton Street, Louisa Street, New North Dexter Street, North Street, Nicholson Street, State Street, Hackett Street, Taylor Court, Harter Street, Hall Street, Fargo Street (east), Rich Street, Union Street, Lytle Street, Lovell Court, Jackson Street, Jefferson Street, Allen Street, Jones Street, Gregmark Place, Morse Street (north of M-21), Batson Court, Bagley Court, Prospect Street, Skyview Trail, Whitetail Court, Division Street, Crawford Street, Stephenson Street, Lafayette Street (from Union Street to Jefferson), Lovell Street, Beardsley Street, East Main Street, East Washington Street (from Dexter to Jefferson), Adams Street, Steele Street, Depot Street, Kidd Street, Library Street, Hudson Street, Harrison Street, Bayard Street, Mill Street, Cleveland Street, Brown Street, Nash Blvd, Brown Street (on point area), Swartz Court, Railroad Street, Colby Street, James Street, Welton Street, Stephenson Place, Wells Street, Church Alley (See RoadSOFT generated reports in Appendix)
- One hundred percent of the sanitary sewers shall be inspected and cleaned annually with any irregularities recorded on the City's GIS maintenance system for Sanitary Systems.
- One hundred percent of the storm sewers shall be inspected and cleaned annually with any irregularities recorded on the City's GIS maintenance system for Storm Sewers.
- One-hundred percent of the water system shall be flushed twice annually for maintenance purposes.

#### **Element 2: Collecting Data to measure progress toward achieving the established goals and objectives**

On the accompanying pages, the data that has been compiled to support the Strategy, Goals and Objectives is found. This data will be refined, expanded, and collected anew during 2005-2006 and in subsequent years.

The pavement systems and data has been compiled for the entire city on all streets for the second full year using the GIS and RoadSOFT programs. Utilizing this data, it will be possible to overlay more sections of the City. Data on age of systems has now been compiled on water, storm and sanitary sewers with the resulting feet of main, percentages, and other information based on minute books and annual reports.

The oldest portions of the system will be rebuilt during 2005 and 2006 with other lines lined using insitu technology. This continues to eliminate the oldest mains and other infrastructure of the systems.



By collecting and overlaying data, a complete picture of surface, base, drainage, and underground will be possible for the first time. All rebuilds are being recorded in ESRI and the GIS system.

### **Element 3: Using Management Systems to Control the Various Process**

Using the City's GIS data system, Policies and Procedures have been developed using ESRI and the City GIS system to monitor and record Sanitary and Storm Sewer cleaning and inspection; water main flushing; hydrant maintenance; valve maintenance and exercising; manholes; and some routine maintenance items. Brush pickup and cleanup; leaf clean-up; and right-of-way maintenance have also been developed in a systematic process. Snow plowing and sweeping was completed in the spring of 2005.

The completed policies will be incorporated and adopted by the council for the General Policy Book that the City has been developing.

ESRI has, virtually, unlimited data fields to record information and data on the assets of the City. The technology allowed feet compilations for all systems in the city and will help to track changes for subsequent generations of both employees, citizens, and councils.

By incorporating cleaning schedules and mapping, the City has found that prior year efforts to maintain the system often went against the flows in sewers. The fact was that direction, size, and flows had been improperly recorded but the addition/creation of a maintenance system that is kept on the GIS data base corrected these deficiencies. As a result, it did take longer to complete the first cleaning of the entire system, but the cleaning took place on a planned, designed system that maximized the efforts being made, leading from home leads to collection sewers to collectors and ultimately to the main interceptors leading to the Publicly Owned Treatment works (sanitary) or in the case of storm—to outfalls in retention/detention areas or the Grand River.

### **Element 4: Developing Appropriate Performance Measures**

To ensure that we are achieving our goals, objectives, and strategies, the City of Ionia Public Works, Public Utilities, and Transportation systems are conducting a voluntary self assessment as part of the Accreditation Process through the American Public Works Association. The goal is to achieve accreditation of these tasks in 2005. We will use the accreditation model to ensure that we have complied with standards and



policies as developed by experts in those areas.

We will also use the PASER system to determine compliance with the condition of roads and the GIS system for compliance with age of system. Finally, the annual audit process will determine how we are doing financially.

The data compiled from PASER and other functions will be compared to determine the effectiveness in achieving the stated strategy for the City. This data will be located on the City's web site and provided as part of the annual budgeting process.

### **Element 5: Identify Standards and Benchmarks**

The various accreditation models contain benchmarks that an agency should have or should be performing. Compliance with these benchmarks that are set by national agencies with considerable input from experts in those fields will ensure that the City and its agencies are at least meeting the national standards. One notation that has been identified is in setting strategies for age of utilities. In the water area, for instance, the goal will be to eliminate all galvanized pipe and cast iron main. Of highest import, however, is the elimination of all lead service leads. Testing has indicated that lead is not a concern and it is believed all of these have been removed but only through the rebuild of the system will this be ensured. However, at some point the ductile iron will be sufficient and need only flushing and monitoring with the life projected well beyond 50 years that has been the benchmark used in our strategy development. The 50 year point guarantees only ductile is being used.

Likewise, as sewers and storm sewers are reconstructed and improved, the new materials (concrete and plastic) last well beyond 50 years with normal maintenance and lack of corrosives. These strategies may have to be amended to simply ensure that all materials are in good shape and verify this through video cameras.

Individual standards and benchmarks will be identified through the State's Asset Management Council to ensure that the City is achieving its stated goals.

The Department of Transportation for the State of Michigan and the Federal Highway Agency are working on various benchmarks for pavement management. RoadSoft, the software used by the City, can generate deterioration curves that will be able to assist in the planning for road maintenance or reconstruction.



The State's AM Council is also working on determining recommendations and guidelines to maintain roads, apply the correct "fix" at the correct time, and continue to cost-effectively maintain the assets from the state perspective. State funding is following these efforts with the latest state change to Act 51 allowing money to be transferred from major streets into local streets if a City has adopted an Asset Management Plan. This effort is part of achieving/meeting that new state law and looking beyond.

#### **Element 6: Developing alternative analysis procedures**

In an effort to look at alternative methods for maintaining the City's assets, the City has committed time from various department heads to serve on state and national committees dedicated to asset management.

Department heads and staff serve on accreditation boards internationally, assist in training agencies from around the world, actively participate at conferences in presentations and efforts, serve on the State's Asset Management Council, serve on state water and sanitary associations, the city hosts training for agencies around the state at no cost in an effort to educate its work force.

As part of the annual personal review process, staff and department managers have to indicate a training program for not only the upcoming year, but a 10 year period. New employees are encouraged to develop a career training track which will keep the city abreast of new changes and methods to determine effectiveness and efficiency.

#### **Element 7: Making decisions based on these results and developing an appropriate program**

Using the data that has been compiled, the PASER data that was prepared for the entire City.

During 2005-2006, more than \$5.6 million of work shall take place through sold bonds. That is on top of nearly \$4 million bonded for by the City to upgrade water, sanitary, storm, curb, gutter, and road surfaces in the City during 2004 and does not include nearly \$1.6 million that developers are paying. Utilizing the data on hand, the strategy presented in this document was adopted by the City Council as part of its 2004-2005 budget with plans looking ahead, 1, 2, 3, and 5 years. This second plan was adopted as part of the 2005-2006 budget process and will be updated in future years.

The only short-coming identified thus far has been the shortage of funds to completely rebuild the local street system, although considerable



efforts have been made in that regard. Funding alternatives will need to be studied and developed for a comprehensive long-term approach to asset management. The federal highway bill remains unsigned and the state's financial system shows no signs of improving which may limit future funds to the city in revenue sharing and road funding.

### **Element 8: Implementing the program**

The City has prepared a strategy and Asset Management Guide that will be adopted by the City Council as part of the annual budget process. The first such program was adopted for 2004-2005 with this latest update for 2005-2006.

### **Element 9: Monitoring and reporting results of actions taken**

The City's report card at this point reflects grades based on last year's work and condition reports.

- All water mains have been located, field verified, valves identified and exercised, shut-offs located, and the data compiled in the GIS data system using ESRI products. Dozens of valves were found and exercised for the first time using this process and the accuracy of the system.
- All sanitary sewer lines have been located, inventoried, and cleaned using a Maintenance Plan. The plan follows the flow and corrected inefficiencies/failures of prior efforts. Manholes have been located through the GIS accuracy; some that have been buried for more than 25 years.
- All storm sewers have been located and inventoried with the outfalls identified using the Maintenance Plan. The cleaning again found systems that had never been cleaned or recorded. In addition, preliminary testing indicates no combined sewer issues with all storm water testing clean from fecal and other bacteria. This effort will be expanded to create a matrix for testing purposes to meet future Storm Water Management regulations.
- All roads have been evaluated using PASER rating scales and the resultant data recorded in RoadSoft and on the city GIS system. The data was used to create a strategy and plan for the future.
- The City is reconfiguring its Public Works budget to reflect the three fields that will record the effectiveness of Asset Management for Roads: Preventive Maintenance, Routine Maintenance, and Structural Improvement. The first budget will be adopted by council for 2005-2006.
- The Small Urban Task Force adopted the road schedule prepared using the PASER rating and GIS data that has been compiled.



- The City Council adopted the preliminary plan and sold \$5.6 million in bonds to achieve the stated results for 2005-2006, on top of \$4 million in 2004-2005. .
- Water and Sewer rates were adjusted, significantly, to reflect that depreciation will be partially funded. This sets aside additional money in the future to continue to tackle the identified problems based on data and performance measures.
- Sewer back-ups have been substantially reduced with one back-up occurring last year that amounted to less than \$5,000. This is significantly less than past years when as much as \$175,000 was paid in sewer back-ups. No claims were recorded for water main breaks or storm sewer plugging.
- Using the Asset Management Strategy has allowed the water production system to operate at peak efficiency during the past year. Cleanings have taken place when wells drop in efficiency, thereby reducing wear and damage to pumps and other parts.
- The wellfield completed a multi-year Wellhead Protection Program to safeguard the investment of the taxpayer. This effort brought the City awards for personnel at the state level, for the program at the state level, and the program has now been nominated for national recognition.
- The waste water treatment plant had all its controls upgraded and, utilizing joint technology, the wellfield and treatment plant systems operated in and through a new SCADA system. This upgraded all of the city's controls and allows 24/7 monitoring/recording of data for the first time. Wireless technology was also added to protect the investment from downtime in SBC systems.
- Self-Assessments have been or are being completed in the departments of the City. The fire division has been internationally accredited by its peers—one of only 89 in the world to achieve this standard (out of 33,000 eligible). Work is progressing on deficiencies identified through the self assessment process in Public Works, Public Utilities, and Administration.
- All hydrants in the water system were color coded and flow tested with the data recorded, for the first time, on the GIS data system. This provided accurate hydrant maps, expected flows, and enabled all hydrants to be working during annual flushing. In prior years, hydrants were found to be in disrepair because corrective action had not taken place even when problems were found. The main reason identified was the haphazard paper trail that relied on human intervention and tracking vs. automated.
- A Hazard Mitigation Analysis was created using the GIS data. In 2005-2006, efforts will continue to identify flood-prone area of the city using the topography data that has been created. The Analysis enables the city to apply for funds through Homeland Security and



FEMA as well as in updating flood maps that were last updated in the 1930's.

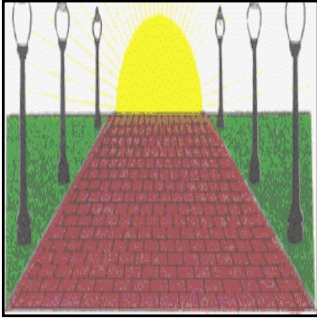
- All road signs have been inventoried and logged on the GIS data system. In 2006, the last remaining pole-mount street name signs will be moved to sign-mounted (on stop signs). This has been found to significantly reduce vandalism and theft.
- Efforts are underway to preliminary inspect all city trees in the city owned rights-of-way and park areas. The City's inventory program was last done nearly 16 years ago and will be updated in 2005-2006 with the data compiled on the GIS data system. The process has removed more than 68 trees in 2005; 62 in 2004 that were found to have problems or be dead/dying. New plantings are being trimmed and inspected.
- All sidewalks have been repaired in the City. More than \$800,000 was invested in residential areas; more than \$500,000 in the downtown during the past five years. Yearly reviews of the system are now taking place with \$50,000 budgeted over the next three years to fix any cracks, separations, or defects.
- Looking at the intermodal aspects of the City, the Dial-A-Ride garage was expanded to allow all buses to be parked inside, thus protecting the city's (and state's) investment in the fleet. Mechanical units (air handling and ventilation) were upgraded as part of this process to enable optimum performance.
- The City's bus fleet was maintained according to adopted schedules and plans with additional funding secured to protect the investment in future years.
- A new communication system is being created, moving all agencies to an interoperable frequency. A new tower has been constructed, 800 mhz frequency received, new radios purchased, and AVL added to the bus fleet. During 2004-2005, the AVL will be expanded into Public Safety, Public Works, and the rest of the city fleet. The data created by the AVL allows the efficiency and effectiveness of the efforts of employees to be recorded and reviewed.



## **APPENDIX**

### **MISSION, VISION, AND VALUES;** **DEPARTMENTAL GOALS AND OBJECTIVES**





# City of Ionia

## *Our Mission*

Our mission is to develop a prosperous community that serves the needs of all of our citizens and businesses while preserving the natural environmental beauty that makes the area rich and affords an excellent quality of life.

## *Our Vision*

- ☐ Promote events that occur in the community on a coordinated basis for maximum community involvement.
- ☐ Instill a measure of pride in all of our employees and the work that they perform for our citizens.
- ☐ Present ourselves in the best professional light when we deal with citizens, businesses, or visitors.
- ☐ Always treat citizens, businesses, and visitors with the courtesy and respect they deserve.
- ☐ Always seek to provide the maximum number of services with the funds allotted to us by our customer.
- ☐ Seek to improve the delivery of services on a continual basis through cost reduction, service enhancement, and quality improvement.
- ☐ Urge all who work or volunteer in and through the City of Ionia to continually strive to improve.
- ☐ Adopt in both practice and procedure, environmentally friendly processes such as recycling, re-use and clean-up.
- ☐ Continually survey to determine the needs of our citizens, businesses, and visitors as well as putting into action the results of the survey instruments.
- ☐ Being the best small town in the country.

## *Our Values*

- ☐ Every person is unique and valuable; people are more important than things. We will evaluate all of our programs and projects on the basis of whether they enhance the life of our citizens, businesses, and visitors.
- ☐ We believe in strong family units. People have a right and duty to participate in the City's activities and programs, seeking together the common good and well being of all. We will not discriminate.
- ☐ Every person has a fundamental right to those things required for human decency. Corresponding to these rights are duties and responsibilities – to one another, to our families, and to the larger society.
- ☐ A basic moral test is how our most vulnerable members are faring. We will seek to provide service regardless of income or social status and will work to involve those who are most vulnerable in the City functions.
- ☐ The basic rights of workers will be respected – the right to productive work, to decent and fair wages, to organize and join unions, to private property, and to economic initiative.
- ☐ We shall show good stewardship of creation. Care for the earth is not just an Earth Day slogan; it is a requirement.
- ☐ We will work to prevent and “throw-away” members of our society. We seek to involve



youth, to help their families provide guidance, and to ensure that they become assets to society and not burdens upon it.

- We strive to provide for a healthy community. This will be accomplished through coordination of various health agencies and community service groups. The goal is to provide a healthy beginning before birth and continue until death. We seek to make every life a value-added part of our community.





*City of Ionia*  
**Department of Public Works**  
**Our Mission, Vision and Value Statements**  
**March 1, 2002**

*Our Mission*

*The Mission of the Department of Public Works is to respond to the public needs and demands to provide inherent services for an attractive, safe, and healthy community through the development and maintenance of public beautification projects, roadways, right-of-ways, and water, wastewater, and storm water systems. The Department of Public Works provides services to the residents of the City of Ionia, surrounding communities, the State of Michigan Department of Corrections, industry, and other City departments.*

*Our Vision*

1. Maintain and increase the sense of community pride and growth through the outright positive appearance of the City's public areas.
2. Provide visual services that beautify and improve the community through numerous programs including annual flower plantings, holiday decorations, decorative street lights, banners, litter clean up, leaf and brush pick up, and annual community clean up days.
3. Increase public awareness as to the services provided, the staff knowledge and skills, and the staff's commitment to the community.
4. Maintain and improve the City's underground and above ground infrastructure to provide consistent utility services to each of the residents, institutions, and industries within the service areas.
5. Strive for continued health and safety improvements in the design, development, and maintenance of public facilities.
6. Maintain a Department of a well organized, educated, and dedicated staff.
7. Strive each day to protect and improve the natural environment throughout the community and work place.
8. Assist whenever needed to provide support for unexpected community emergencies, accidents, and natural events.

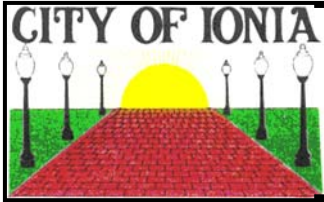
*Our Values*

1. Update and provide for all staff technological training in the use of techniques, utilities, street maintenance and equipment. Continue staff education and training for safety and health related topics.
2. Respect and maintain the community, the public facilities and spaces, and equipment.



3. Serve the community in a courteous and respectful manner.
4. Encourage a sense of personnel pride in each day's work and a sense of respect and trust within the entire staff team.
5. Support the continued development of intellectual thought, creative thinking, and problem solving.
6. Appreciate the commitment of the staff to work long hours, in difficult weather conditions, and sometimes hazardous conditions.
7. Provide opportunities for continued personal education and professional certification through professional associations, educational institutions, and professional interchanges.





# Goals and Objectives

## Department of Public Works

**The Goals and Objectives of the Department for the 2005-2006 budget year are:**

### **Governance and Administration**

1. Report to the city Manager monthly regarding streets and utilities as well as human resources. Move annual report to computer formats.

### **Assessment and Planning**

1. Televisе and assess all aspects of the sanitary sewer system with the objective of creating a long-range improvement plan. Next year expand to compiling data that is observed by staff during cleaning.

2. Review all water mains that are cast and make long-term plan to replace/upgrade.

### **Goals and Objectives**

1. Continue the paving program on the city street system with all major streets rebuilt by the end of 2007 fiscal year. Reason for extending time is that additional streets were added to major system during 2004-2005.

2. Repave city streets using data from RoadSOFT as well as the capital improvement plans and strategies adopted by council.

3. Clean up all property around the city garage and landscape same for professional appearance.

4. Implement all GIS functions in the new city garage building and train staff accordingly. Also train staff in Asset Management theory and processes.

### **Financial Resources**

1. Work with City Manager on grant applications and projects to remove work from general fund and utility funds.

2. Work with City Manager and others on developing funding sources for ongoing street programs (locals).



3. Continue to book and be chosen as a partner for work for others such as street sweeping highways, surrounding communities, etc. This diversifies our base and pays for equipment for our use.

### **Programs**

1. Expand our confined space program and partner with Utilities and Public Safety to form one versatile squad with additional efforts in HazMat response through Homeland Security.
2. Look at continued improvements in the city safety program, particularly with new building and equipment.
3. Look at development of evacuation standards and programs; define role of Public Works in those plans.

### **Physical Resources (buildings, equipment)**

1. Paint the steel areas of all out buildings in the complex to match.
2. Replace the high-ranger bucket vehicles.
3. Take delivery of one new dump truck and three pick-up trucks.

### **Human Resources (people)**

1. Look at continued training for all employees based on their reviews and education program.

### **Training and Competency**

1. Mosquitoes and diseases borne by same (train staff)
2. Street construction standards and programs to further improve our services.
3. Plan and conduct a public relations activity such as “APWA Program” for Public Works awareness when new building is complete.

### **Essential Resources (resources needed to complete your mission)**

1. Continue replacement of older equipment with new.
2. Continue to evaluate the needs of the customer and match with employees and training.

### **External Systems Relations**



1. Continue to work on development of Emergency Operations System with departments in the City. This fiscal year, a tabletop exercise will involve all employees in learning about and using Incident Command.

2. Work with engineers and other departments on master plans and goals for the city.





*City of Ionia*  
**Department of Public Utilities**  
**Mission, Vision and Value Statements**  
**March 1, 2002**

*Our Mission*

*The Utilities Department exists to provide safe and environmentally compliant water and wastewater services including water supply and treatment, and wastewater treatment. These services are provided to the residents of the City of Ionia as well as to the Michigan Department of Corrections facilities, industry and the surrounding townships of Easton, Ionia, and Berlin.*

*Our Vision*

1. Provide water and wastewater services that maximize the usage of the existing infrastructure and plan future development to meet the expected growth of the regional area for residents, industry, agriculture, and the Michigan Dept. of Corrections.
2. Maintain a security and safety plan that provides protection of the drinking water system and to the employees.
3. Protect the environment and safety of the public and staff through programs such as industrial pretreatment, careful execution, and handling of hazardous chemicals and wastes.
4. Provide water and wastewater treatment services that exceed the EPA's and MDEQ requirements each and every day.
5. Continue to provide laboratory testing services for the City's services as well as regional governmental agencies. Continue to update procedures, technologies, and services to meet the growing and changing regulatory requirements.
6. Provide courteous and responsive service to public requests, inquiries, and needs.
7. Administer the department to provide fair and effective invoicing and collection of fees.
8. Educate the public through increased public awareness, educational programs, and plant tours.

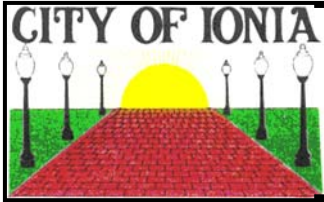
*Our Values*

1. Meet the needs of the public in the most courteous and responsive way possible through assistance with problem identification, completion of the appropriate tasks, and follow up.



2. Foster and encourage a team effort for the delivery of department services. Encourage trust, teamwork, and camaraderie.
3. Provide continues health and safety training for all staff members in order to encourage a safe work environment.
4. Establish a public relations plan that encourages staff interaction with the public for education and public relations.
5. Education and training for each employee will be encouraged and determined in order to provide continued personal growth and insure the protection of the City's water and wastewater services.
6. Carry out the administrative services in the most efficient, courteous and fair ways possible.
7. Interact with associations and organizations that foster the interchange of ideas and information to encourage continued improved services and education for the staff.
8. Provide fair and equitable wages for employees that offer continued growth.





# Goals and Objectives

## Department of Public Utilities

**The Goals and Objectives of the Department for the 2004-2005-budget year are:**

### **Governance and Administration**

1. Maintain current staff levels; review duties and assignments
2. Monitor budget, policies, procedures and ordinance.
3. Ensure compliance with all state and federal regulatory requirements.

### **Assessment and Planning**

1. Continue the upgrade of the city water meters for accuracy.
2. Pursue other aquifer possibilities to identify future well locations.
3. Maintain equipment and physical facilities for the WWTP and Well Field and water distribution system.

### **Goals and Objectives**

1. Convert water meters for accurate reads; install more radio readers for pits and developments.
2. Prevent WWTP / Well field maintenance costs from increasing irregularly through preventive maintenance programs/processes.
3. Promote more education, particularly in IPP regulations, tours and public awareness.
4. Maintain NSF drinking water laboratory status.

### **Financial Resources**

1. Water usage billing reviews to see where system can be improved and service added.
2. Review grants for opportunities to fund improvements outside normal enterprise funding or general fund.



3. Continue to market our laboratory services for communities.

### **Programs**

1. Continue the wellhead protection program.
2. Conduct and complete emergency management.
3. Update and report our consumer confidence in our water supply.
4. Maintain compliance from industrial users.

### **Physical Resources (buildings, equipment)**

1. Place well 17; rebuild two other wells.
2. Upgrade controls at the WWTP
3. Restore the South Ionia Lift Station
4. New well house for well #16 with standby power.
5. Inspect and paint elevated storage tank on Cyrus Street; review dependability reports based on rebuilds of system.

### **Human Resources (people)**

1. Continue to work with the mayor, manager, council and others to develop community support and awareness for Public Utilities.

### **Training and Competency**

1. Drinking water education (both in-house and for our customers)
2. Safety Training
3. WWTP education for schools and our customers
4. Attend conferences by director and staff in accordance with review and schedules.

### **Essential Resources (resources needed to complete your mission)**

1. Commitment of the community for environmental quality as well as accountability.

### **External Systems Relations**



1. Continue to work on development of Emergency Operations System with departments in the City. This fiscal year, a tabletop exercise will involve all employees in learning about and using Incident Command.

2. Maintain relationships with regulatory agencies both state and national.





## City of Ionia COMMUNITY DEVELOPMENT DEPARTMENT

### *Our Mission*

Working with the Community to assure implementation of Public Policy and to create a safe and well-planned place to live, work and play.

### *Our Vision*

The Community Development Department of the City of Ionia, in partnership with other city departments, will work diligently to continue to earn the ever increasing trust, respect and support of our citizens as we strive to improve government operations and modernize our methods of enforcement and techniques.

### *Our Values*

Our **visionary** outlook encourages an unrestrictive, forward and outward looking approach that keeps us from becoming static.

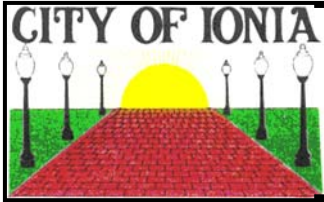
The Community Development Department is **credible** because of its track record of reliability, integrity, accountability and value for service.

Because we operate in an **impartial** way, we are seen as approachable by all stakeholders regardless of size, sector or politics.

Our determination to be **responsive** to the needs of our clients leads to service beyond expectations.

Our **positive attitude** is reflected in the dignified, respectful, co-operative, objective and realistic way we approach both people and tasks.





# Goals and Objectives

## Department of Community Development

**The Goals and Objectives of the Department for the 2004-2005 budget year are:**

### Governance and Administration

1. The manner in which this city government department controls its' authority will continue to improve. Tighter control of substandard property will be achieved. More one on one verbal conversations with property owners will be instituted.
2. The affairs of management of this department will be put on timelines of progress. Every effort will be made to educate the property owner first then if this fails to remedy the situation, court action will follow.

### Assessment and Planning

1. The method of evaluating the performance of this department include, permit records, monthly records of inspections, interactions, and actions by this department, appearance of formerly substandard properties.
2. Continue to develop methods and approaches to problem areas within the city.

### Goals and Objectives

1. The 2001 Master Plan has been implemented; work with Planning Commission on updates for 2006 to include Blueprints for Michigan's Downtowns reports, sidewalks, and other plans.
2. Building Department: Continue to run the Building Department with efficiency and thoroughness. Complete the extensive inspections of the large projects currently underway and large projects in the future.
3. Code Enforcement: Keep constant pressure on the property owners and residents who continually attempt to skirt the provisions of the International Maintenance Code. Keep constant pressure on three problem households located around the entrance to Harper Park.
4. Sidewalk Department: The sidewalk replacement program has been completed. This department will work with the Department of Public Works to correct any substandard sidewalks found to exist.



5. Safety: Attend monthly safety meetings and encourage other departments to participate in safety programs. Assure that all city buildings are performing their required safety checks and educational programs.

6. City Hall Maintenance: Continue to maintain the City Hall grounds and remedy any structural or maintenance problem that occurs.

7. Work with Public Safety to institute a city-wide fire inspection program for commercial structures.

### **Programs**

1. Planning & Zoning
2. Building Department
3. Code Enforcement
4. Sidewalk Department
5. Safety
6. City Hall Maintenance
7. Emergency Assessment Coordinator
8. Certified Fire Inspection

### **Physical Resources (buildings, equipment)**

1. Maintain grounds and building.
2. Clean carpets.
3. Install all requested fixtures or equipment related to maintenance.
4. Maintain equipment necessary to complete duties.

### **Human Resources (people)**

1. Continue to develop better employee relationships.
2. Continue to develop better customer relationships, ie, sending thank you notes when someone cleans up a property.
3. Commend employees for good performance and work with employees to improve



weaknesses.

### **Training and Competency**

1. Complete required classes to maintain building inspector/plan review registration. 30 hours
2. Attend 10 hours of safety training
3. Attend 10 hours of planning and zoning education.
4. Attend 10 hours of Emergency Planning.
5. Any other training as deemed necessary by this department of management.
6. Maintain Fire Inspector I certification and attend Fire Inspection conference and one other seminar to maintain fire inspector certification. 20 hours

### **Essential Resources (resources needed to complete your mission)**

1. Physical resources- vehicle, tools.
2. Fiscal resources- permit fees, general fund.

### **External Systems Relations**

1. Continue to work on development of Emergency Operations System with departments in the City. This fiscal year, a tabletop exercise will involve all employees in learning about and using Incident Command.
2. Continue to maintain a good working relationship to all city departments. Other departments play a key role in performance of this department. Without cooperation much less can be achieved.





# City of Ionia

Department of Transportation

## Our Mission

The mission of Ionia Dial-A-Ride and its management and staff is to provide time sensitive, affordable transportation for all citizens within our service area. Our motto, "Your Ride is Our Pride" is based upon providing effective and efficient service to those who rely upon Public Transportation

## Our Goals and Objectives

To promote public transportation services for the residents of the service area that Ionia Dial-A-Ride serves.

To provide transit service based on a 15 minute response time.

To provide public transit service that is within 5 minutes of schedule pickup time 95% of the time.

To provide transit service that is 98% reliable (less than 2% missed calls)

Establish and implement a "General Operating Policy"

Establish and implement an "Employees Operation Manual"

Establish and implement a "Vehicle Operations Training Program"

Establish a "44" file which includes the daily, monthly, and yearly operational aspects of Ionia Dial-A-Ride

Reduce the number of complaints by 10% from last year

Develop an employee safety committee and continue to meet on quarterly basis

Work with other City Departments in providing transportation services to their prospective programs

Implement the new trolley into the Dial-A-Ride system

Work with MPTA and others on an accreditation model





- Pump\_Station
- Manholes
- Clean\_Out
- street centerlines

——• <all other values>

0  
2  
3  
4  
6  
8  
10  
12  
15  
18  
24

 <all other values>

A-1  
A-2  
A-3  
A-4  
A-5  
A-6  
A-7  
B-1  
B-2  
B-3  
B-4  
B-5  
B-6  
C-1  
C-2  
C-3



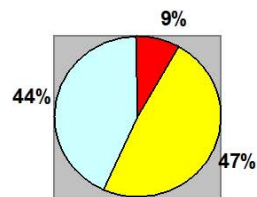




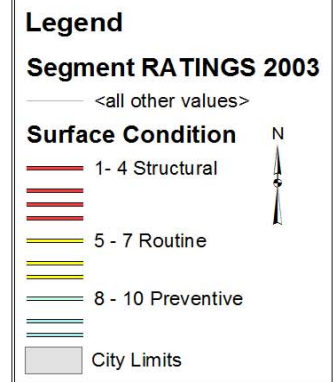
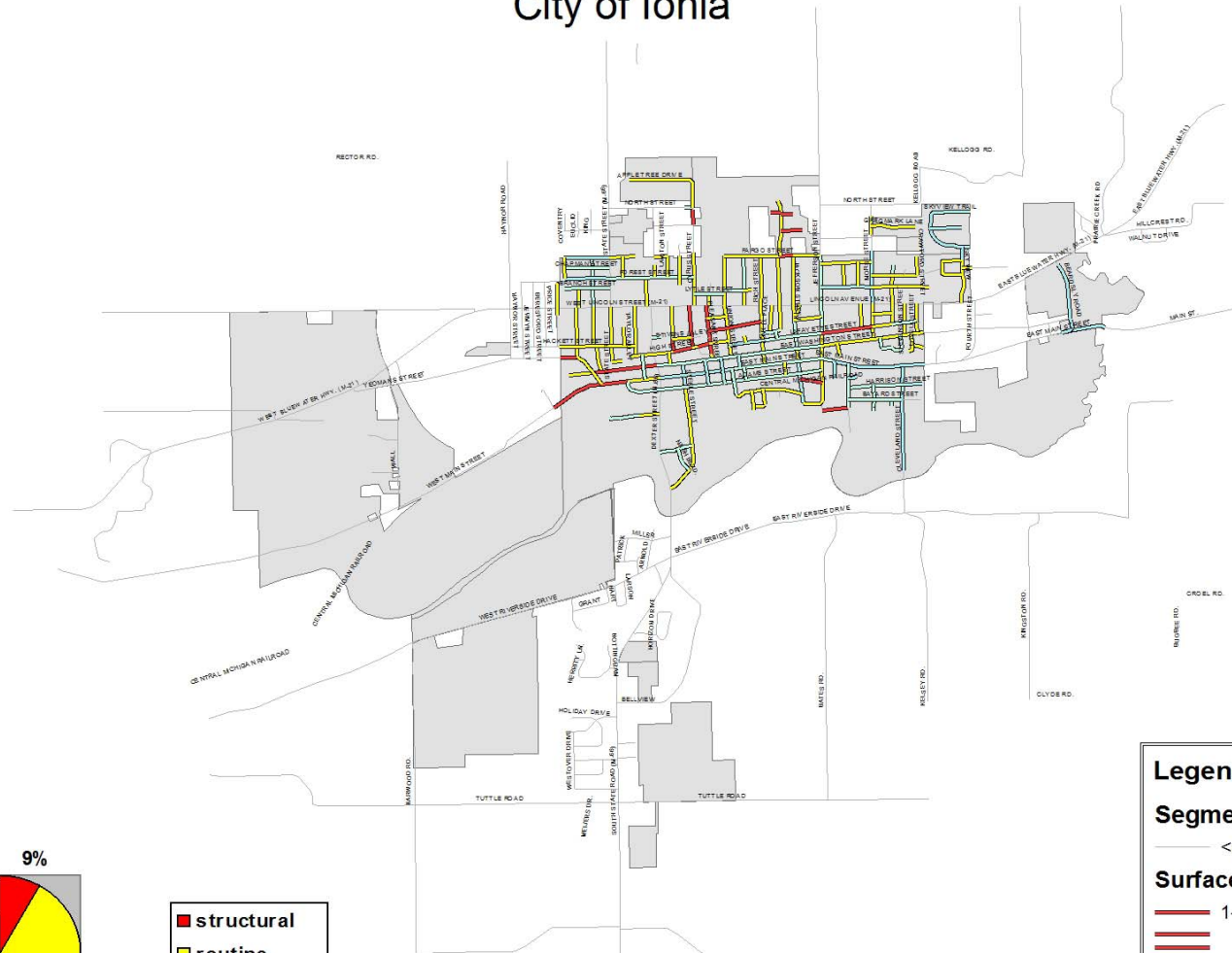




# City of Ionia

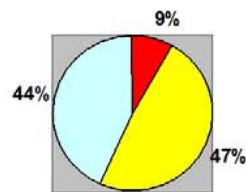


■ structural  
■ routine  
■ preventative

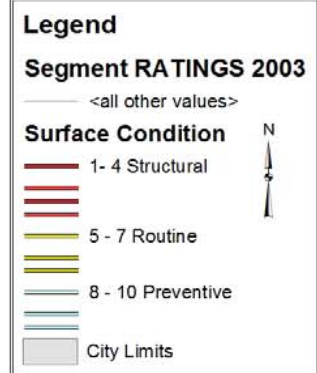
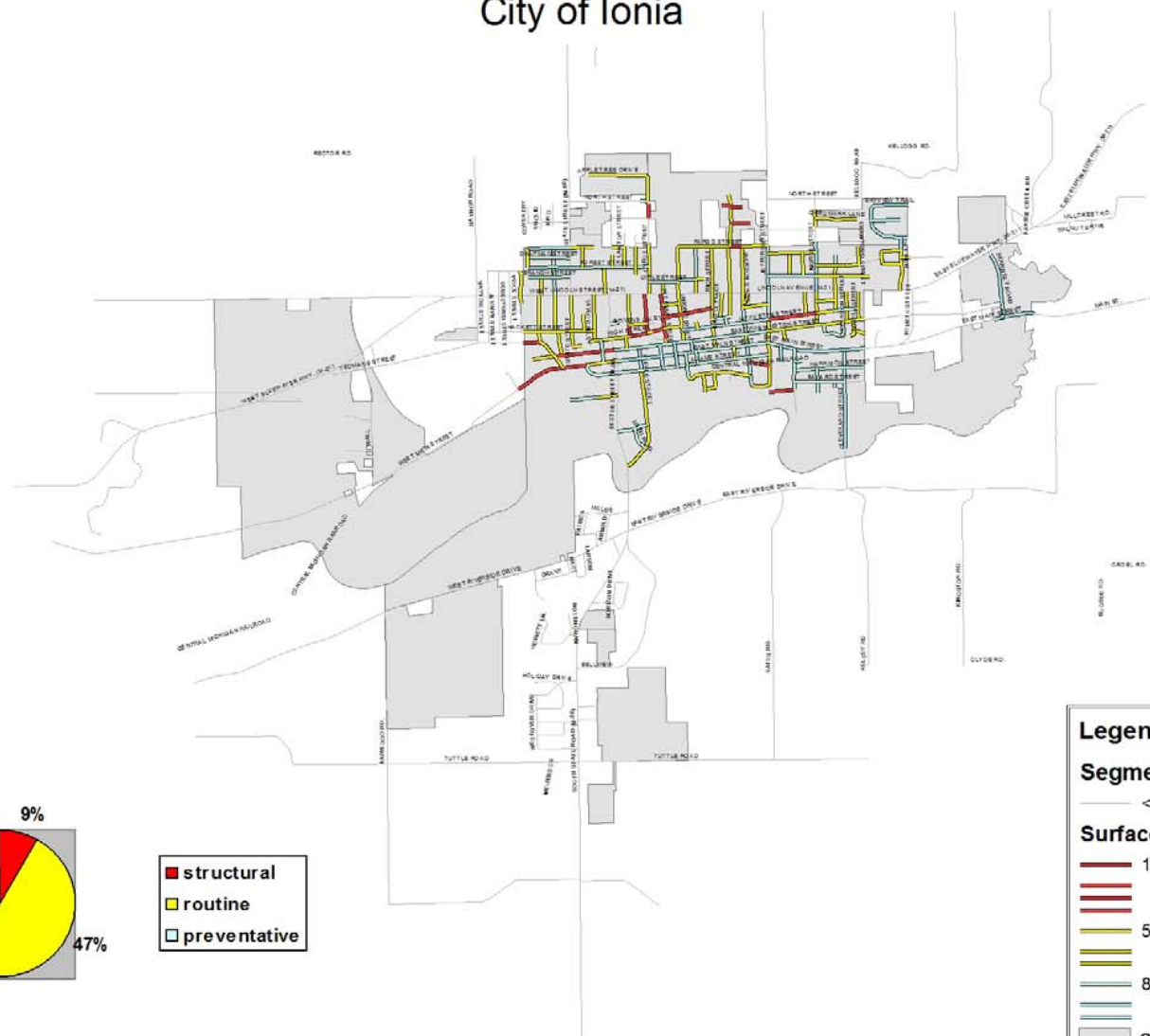




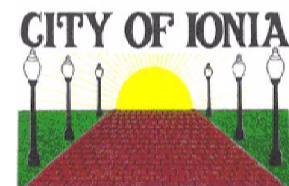
# City of Ionia



■ structural  
■ routine  
■ preventative

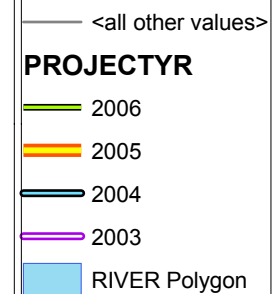






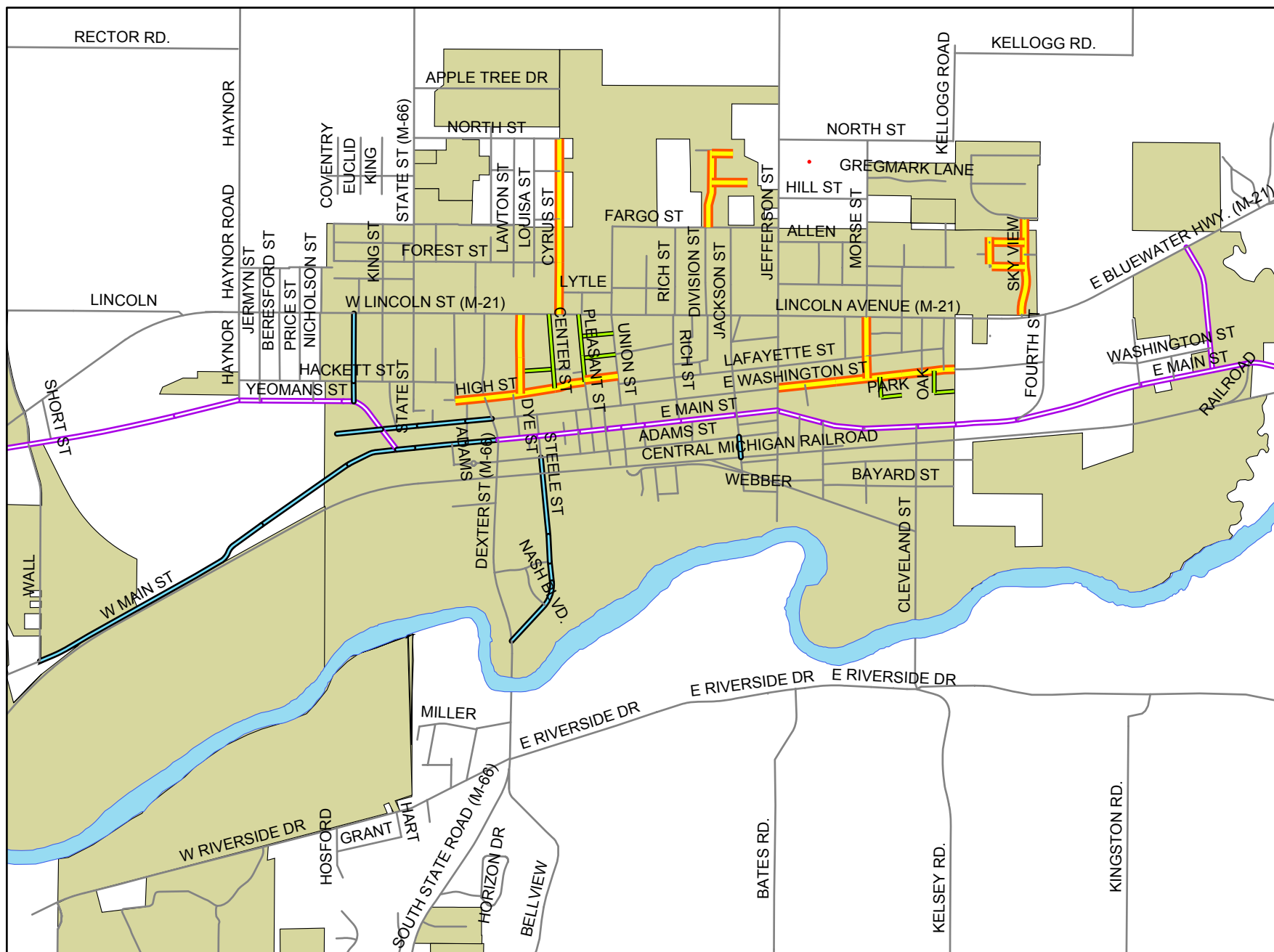
## 2005 Street Projects

### Legend

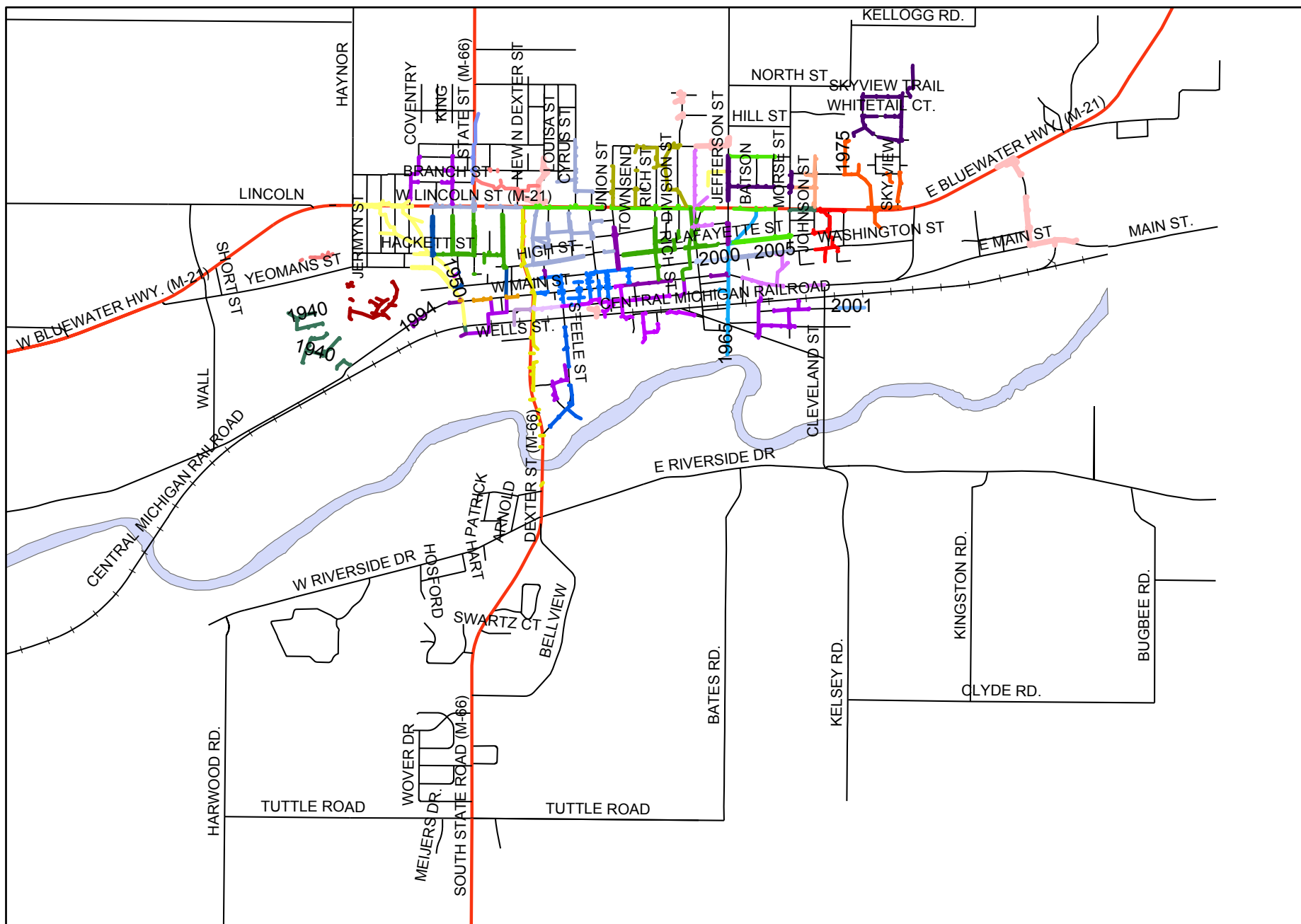


0.09 0.045 0 0.09 Miles

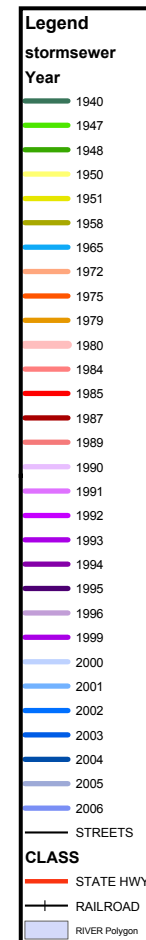
1 inch equals 0.40 miles







Storm Sewer  
Construction by Year

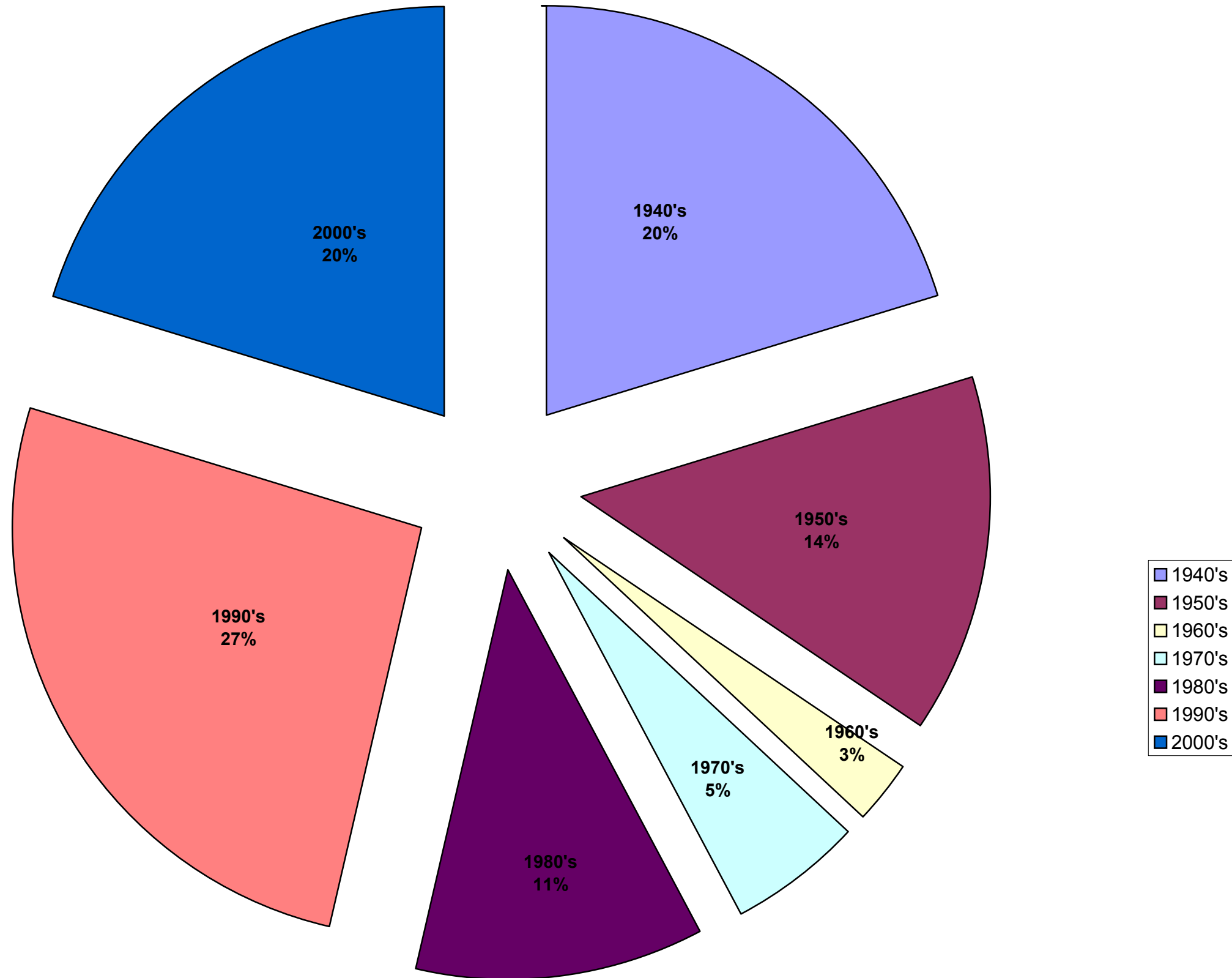


1 inch equals 0.55 miles

4520 450 Feet

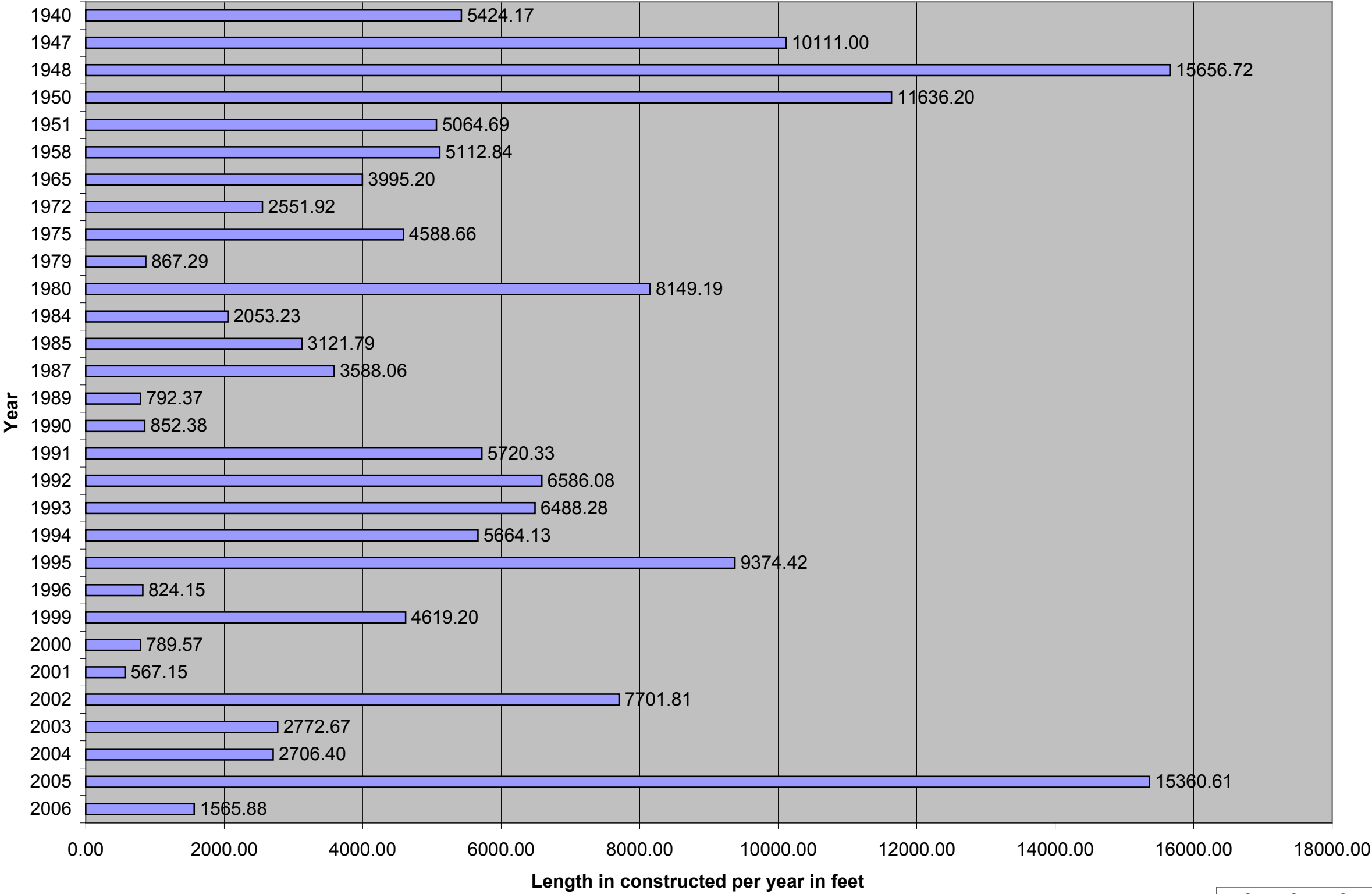


Storm Sewer Constructed





Storm Sewer Constructed

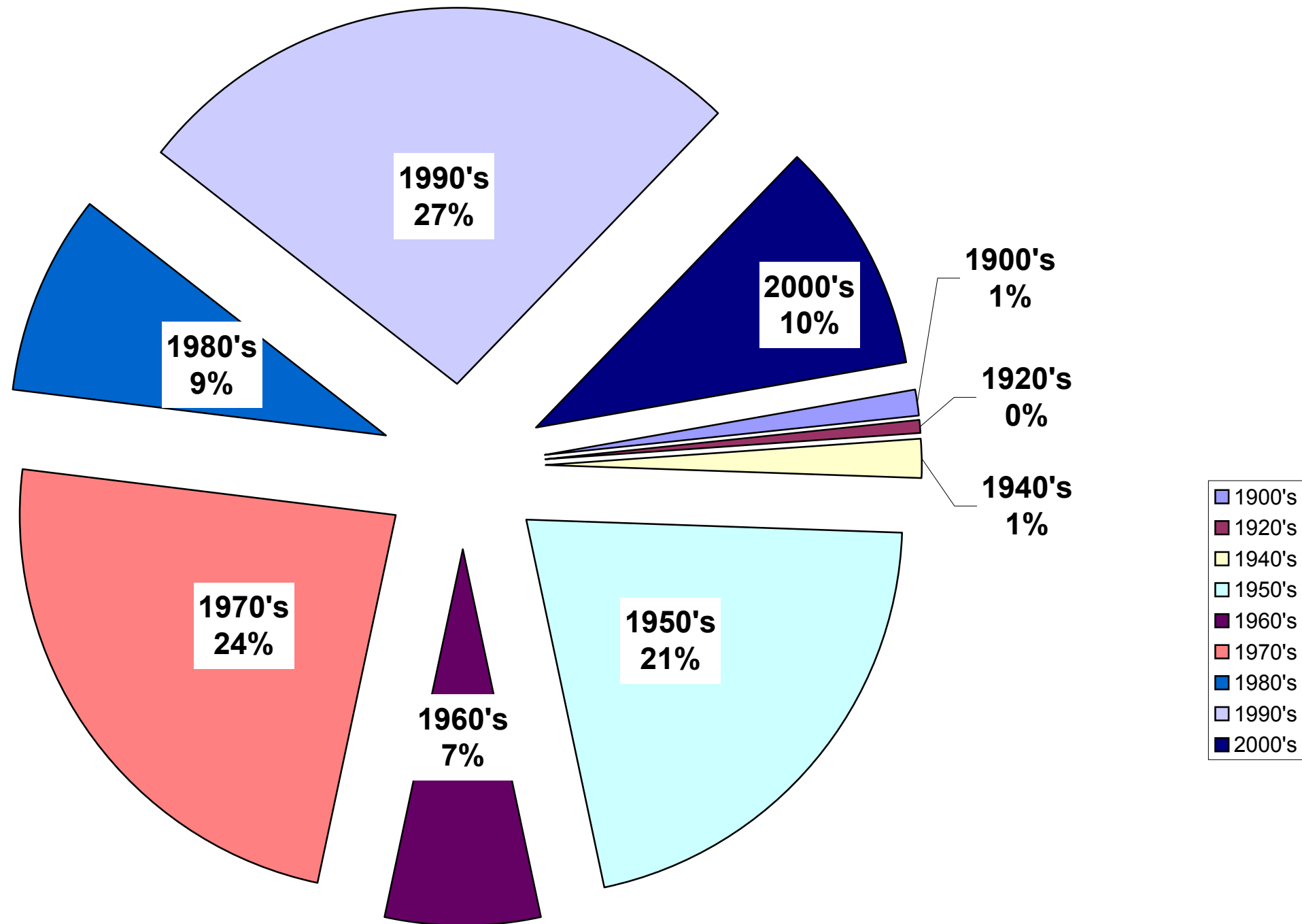






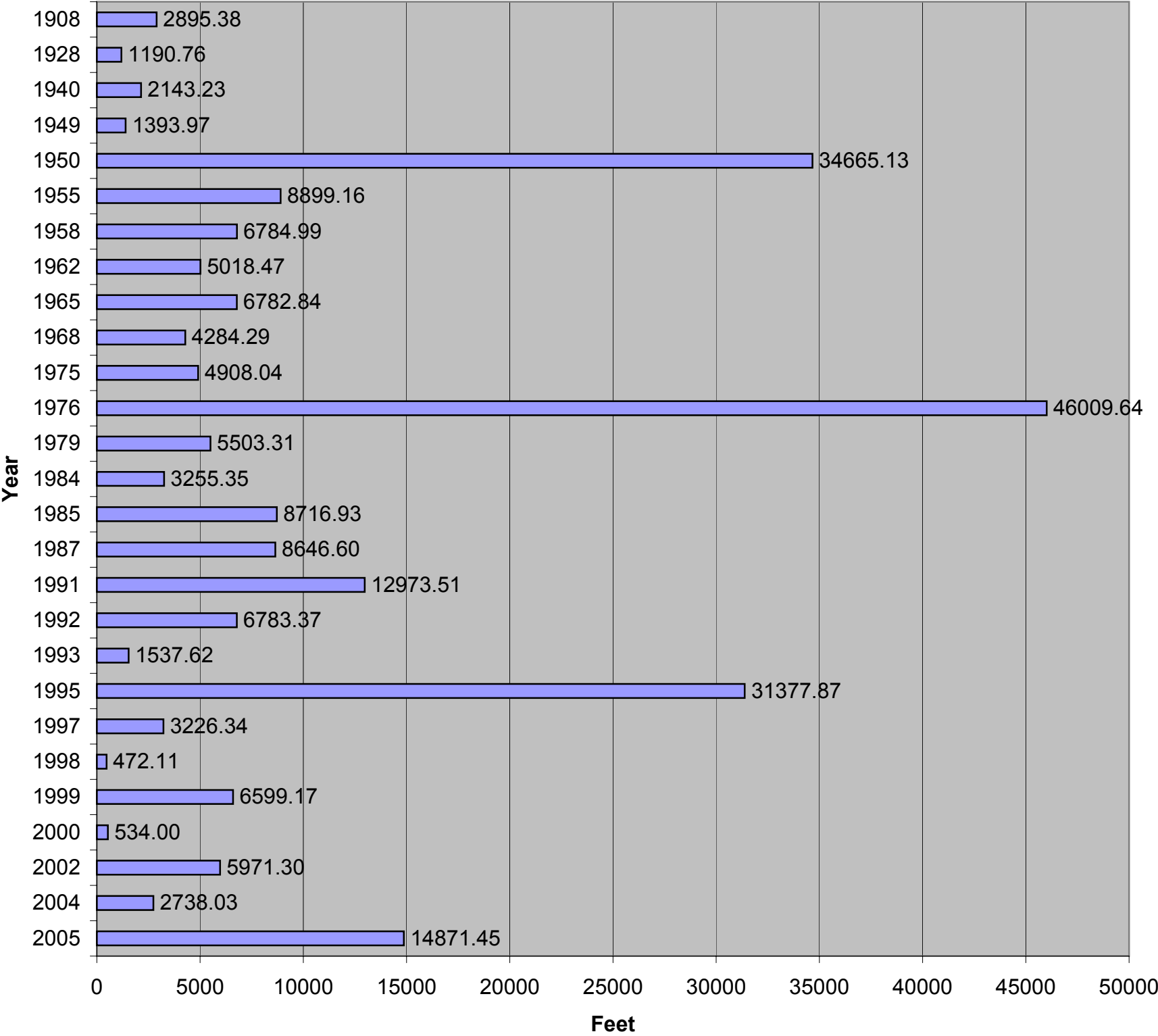


Sanitary Sewer Decade Constructed





Sanitary Sewer Pipe - Year Constructed



Sanitary Sewer Pipe - Year Constructed





Waterline  
Year Pipe  
Was Constructed



**Legend**

**Waterline**

**Year**

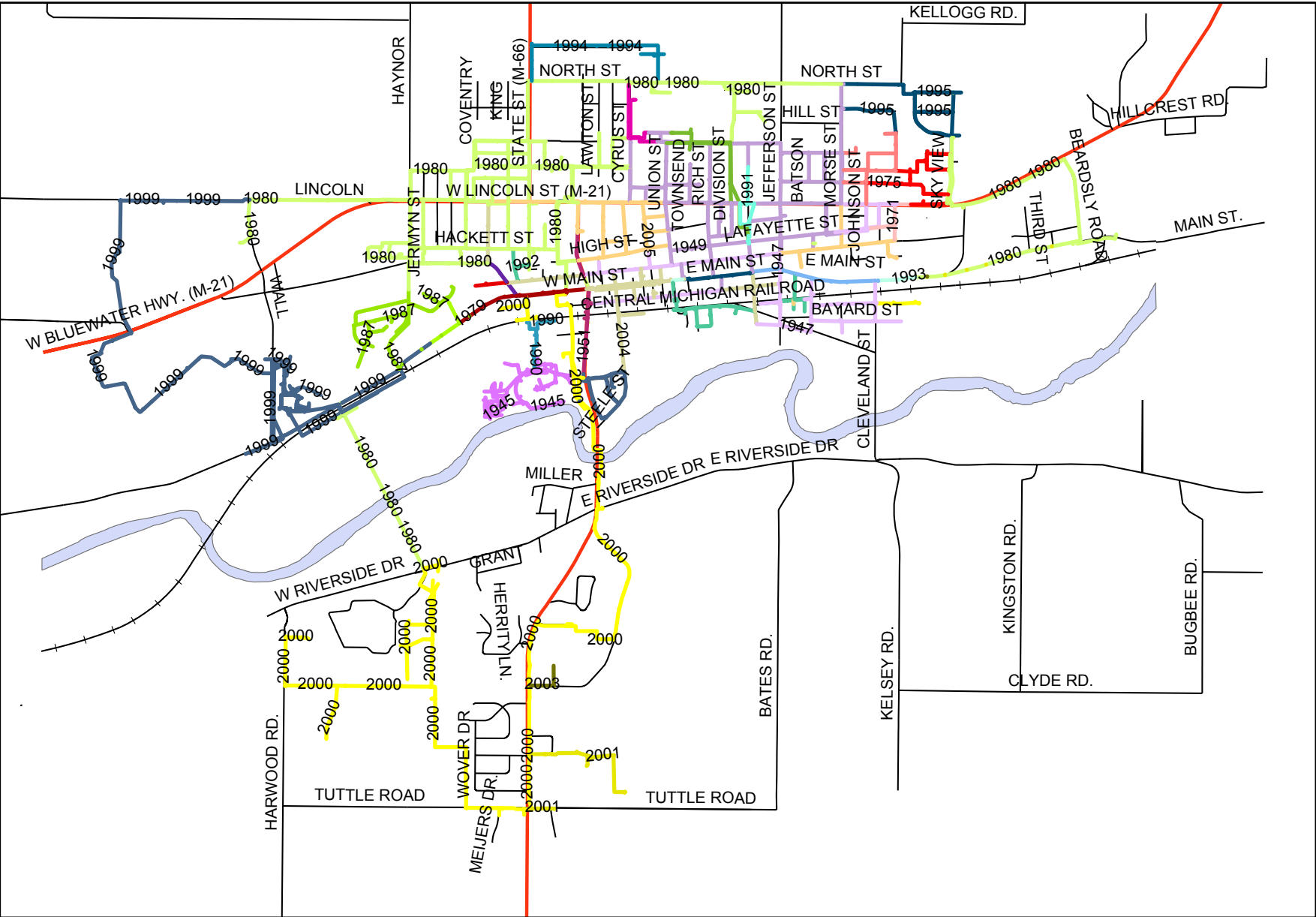
- 1940
- 1945
- 1947
- 1949
- 1951
- 1959
- 1960
- 1971
- 1972
- 1975
- 1978
- 1979
- 1980
- 1981
- 1987
- 1990
- 1991
- 1992
- 1993
- 1994
- 1995
- 1997
- 1999
- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006

**CLASS**

- STREETS
- STATE HWY.
- RAILROAD
- RIVERS Polygon

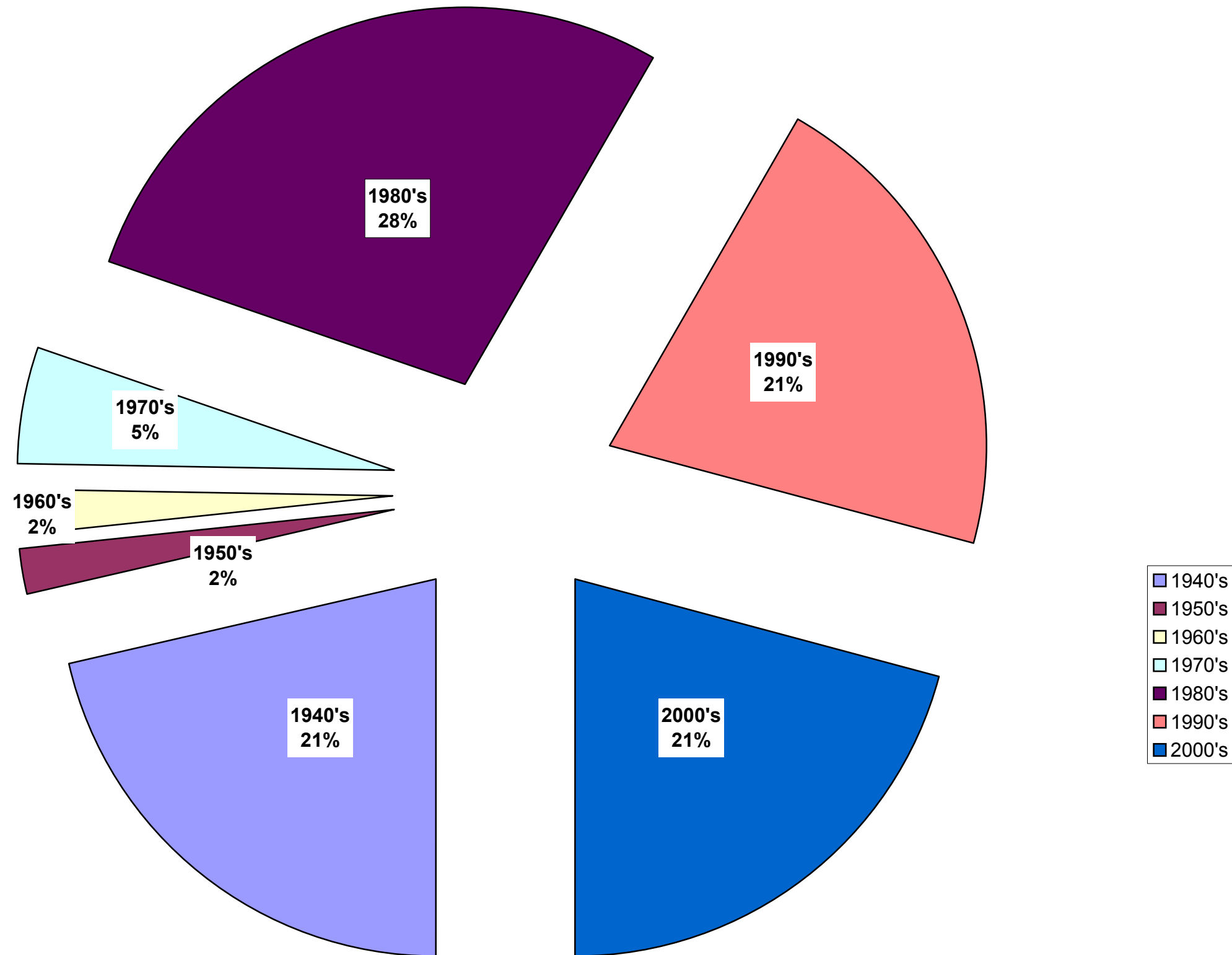
1 inch equals 0.60 miles

490450 490 Feet



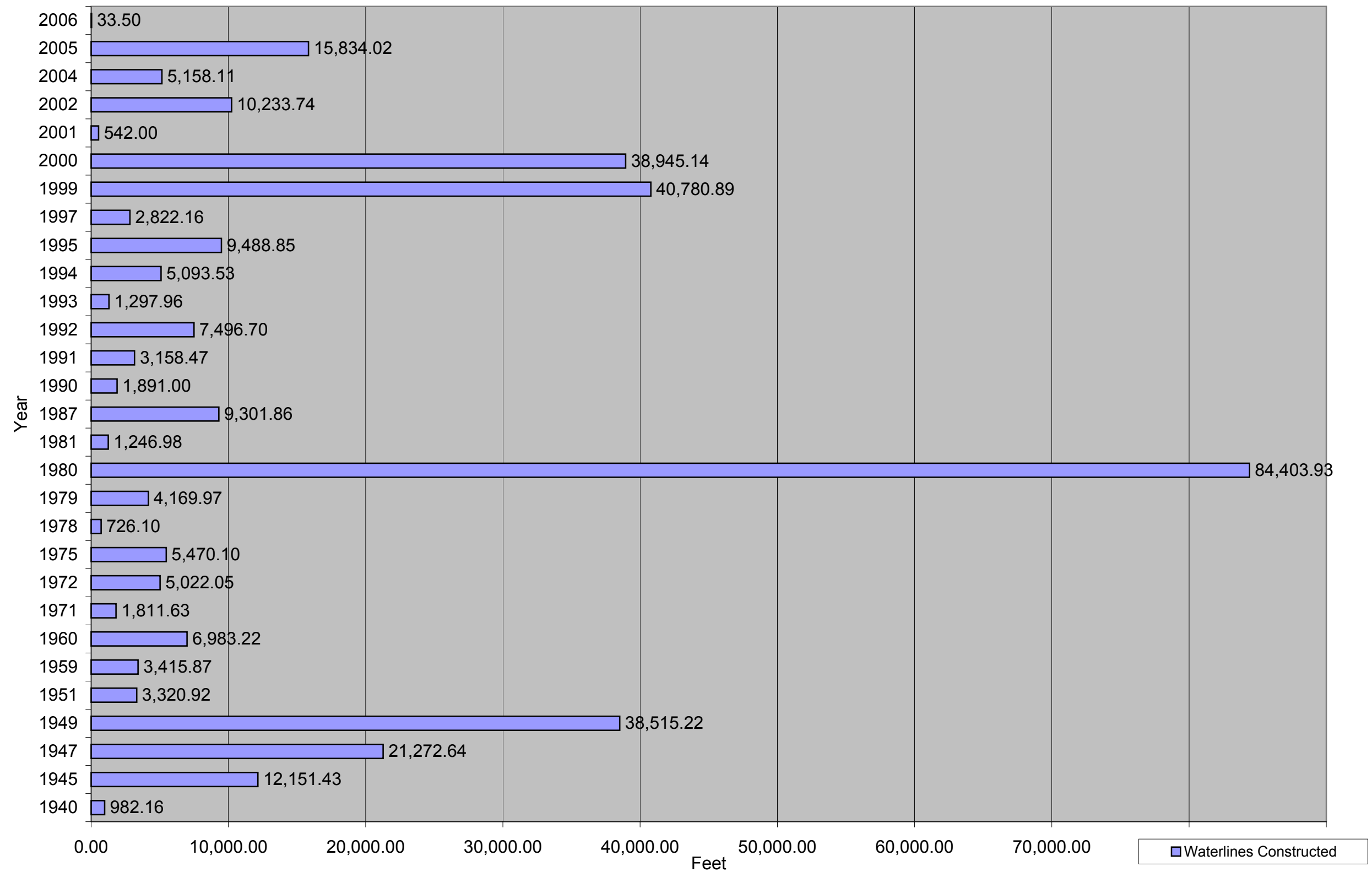


Waterlines Constructed By Decade





Waterlines Constructed





## CITY OF IONA

	A	B	C	D	E	F	G	H	I	J	K	L	M
37		TOTAL UTILITY DEBT PAYMENTS:											
38	Principal:		3,700,000	4,200,000	3,600,000	8,400,000	SDS Plant			SEWER	WATER	SDS	
39	Year:		2005	2004	2001	1999	1990-1976			PRINCIPAL PAYMENTS			
40			ESTIMATED				estimation						
41	2004-2005			148,604	257,363	705,738	518,125	1,629,829		107,635	947,325	574,869	1,629,829
42	2005-2006		166,500	178,325	252,863	682,988	516,075	1,796,750		165,399	1,019,761	611,591	1,796,750
43	2006-2007		166,500	178,325	248,863	661,288	518,700	1,773,675		164,419	995,461	613,796	1,773,675
44	2007-2008		190,375	252,200	293,863	690,963	418,500	1,845,900		204,769	1,103,261	537,871	1,845,900
45	2008-2009		213,125	249,950	287,863	670,963	420,600	1,842,500		209,449	1,089,611	543,441	1,842,500
46	2009-2010		234,750	247,700	281,863	699,713	422,500	1,886,525		213,791	1,124,148	548,586	1,886,525
47	2010-2011		255,250	245,263	324,863	677,550	424,200	1,927,125		229,745	1,138,967	558,413	1,927,125
48	2011-2012		250,750	242,638	316,613	680,000		1,490,000		225,586	1,132,492	131,922	1,490,000
49	2012-2013		246,250	264,450	332,581	705,369		1,548,650		234,692	1,176,897	137,061	1,548,650
50	2013-2014		265,625	260,575	322,175	679,250		1,527,625		236,793	1,151,764	139,068	1,527,625
51	2014-2015		260,000	281,075	335,300	677,375		1,553,750		244,471	1,165,858	143,422	1,553,750
52	2015-2016		254,375	276,075	322,800	700,125		1,553,375		238,221	1,175,170	139,984	1,553,375
53	2016-2017		272,625	295,575	310,300	697,563		1,576,063		246,484	1,183,358	146,222	1,576,063
54	2017-2018		265,875	289,575	298,175	693,875		1,547,500		239,688	1,165,414	142,398	1,547,500
55	2018-2019		259,125	307,966	335,250	664,625		1,566,966		252,263	1,166,083	148,619	1,566,966
56	2019-2020		276,250	300,747	321,150			898,147		251,781	497,246	149,120	898,147
57	2020-2021		268,375	293,419	307,050			868,844		243,765	480,479	144,599	868,844
58	2021-2022		260,500	359,388				619,888		185,966	309,944	123,978	619,888
59	2022-2023		276,500	348,606				625,106		187,532	312,553	125,021	625,106
60	2023-2024		267,500	337,669				605,169		181,551	302,584	121,034	605,169
61	2024-2025		282,375	375,450				657,825		197,348	328,913	131,565	657,825
62	2025-2026		272,250	361,950				634,200		190,260	317,100	126,840	634,200
63	2026-2027		286,000	348,300				634,300		190,290	317,150	126,860	634,300
64	2027-2028		274,750	334,500				609,250		182,775	304,625	121,850	609,250
65	2028-2029		287,375	320,700				608,075		182,423	304,038	121,615	608,075
66	2029-2030		275,000	306,900				581,900		174,570	290,950	116,380	581,900
67													
68			6,328,000	7,405,923	5,148,931	10,287,381	3,238,700	32,408,935					



**RATE STRUCTURE COMPARISON**  
**QUARTERLY USAGE BILLING AMOUNTS**

<u>Residential Rates:**</u>	<b>NEW</b>	<b>OLD</b>	<u>Belding*</u>	<u>Portland</u>	<u>Lowell</u>	<u>Muir</u>	<b>Converted from</b>	<b>Not updated since Spring 2004</b>			
	<b>lonia</b>	<b>lonia</b>					<b>100 cubic</b>	<b>Charlotte</b>	<b>Rockford</b>	<b>Millford</b>	<b>Big Rapids</b>
WATER per 1,000 gal	\$1.70	\$1.40		\$2.38	\$1.68	\$87.75	Hastings \$1.46	\$1.35	\$2.70	\$2.22	\$3.29
SEWER per 1,000 gal	2.40	2.10	per 100 cubic feet - convert into 1,000 gallons	3.39	1.80	53.25	3.07	3.10	2.53	4.93	3.16
DEBT-Water	9.00	9.00		33.60	19.75	15.00	14.49	24.00	24.27	12.00	15.66
DEBT-Sewer	24.00	24.00		20.01	12.50	9.00	29.16	53.00	32.37	4.33	5.10
OTHER:											

<b>QUARTERLY</b>	<b>NEW</b>	<b>OLD</b>	<b>Increase</b>								
<b>Usage:</b>	<b>lonia</b>	<b>lonia</b>	<b>Per Quarter</b>								
1,000	\$37.10	\$36.50	<b>\$0.60</b>	\$59.38	\$35.73	\$165.00	\$48.18	\$81.45	\$61.87	\$23.48	\$27.21
20,000	<b>\$115.00</b>	<b>\$103.00</b>	<b>\$12.00</b>	<b>\$169.01</b>	<b>\$101.85</b>	<b>\$165.00</b>	<b>\$134.29</b>	<b>\$166.00</b>	<b>\$161.24</b>	<b>\$159.33</b>	<b>\$149.76</b>
100,000	\$443.00	\$383.00	<b>\$60.00</b>	\$630.61	\$380.25	\$165.00	\$496.86	\$522.00	\$579.64	\$731.33	\$665.76
1,000,000	\$5,585.00	\$4,985.00	<b>\$600.00</b>	\$8,182.45	\$4,931.25	\$165.00	\$6,496.34	\$7,915.00	\$7,778.80	\$7,884.85	\$7,384.20
(lonia charges extra REU's for over 100,000 gal usage)											

\*\* Based on 5/8" meter, water & sewer related charges only.



**State of Michigan**

**TRANSPORTATION ASSET MANAGEMENT COUNCIL**

**Steven Warren**

**Deputy Director/Director of Planning**

Kent County Road Commission  
1500 Scribner Avenue NW  
Grand Rapids, Michigan 49504  
Telephone: 616-242-6949  
Email: [swarren@kentcountyroads.net](mailto:swarren@kentcountyroads.net)  
Fax: 616-242-6980

**William McEntee**

**Director of Permits & Environment**

Road Commission for Oakland County  
2420 Pontiac Lake Road  
Waterford, Michigan 48328  
Telephone: 248-858-4891  
Email: [bmcentee@rcoc.org](mailto:bmcentee@rcoc.org)  
Fax: 248-858-4773

**Thomas Wieczorek, City Manager**

City of Ionia  
P.O. Box 496  
Ionia, Michigan 48846-0496  
Telephone: 616-527-4170 - Ext. 223  
Email: [tom@city.ionia.mi.us](mailto:tom@city.ionia.mi.us)  
Fax: 616-527-0810

**Bob Slattery, Mayor**

City of Mt. Morris  
301 Washington Avenue  
Mt Morris, Michigan  
Telephone: 810-767-4920 – Ext.310  
Email: [RSlattery@gcrc.org](mailto:RSlattery@gcrc.org)  
Fax: 810-767-5373

**Carmine Palombo, Director**

Transportation Programs  
Southeast MI Council of Governments  
535 Griswold, Suite 300  
Detroit, Michigan 48226  
Telephone: 313-961-4266  
Email: [palombo@semcog.org](mailto:palombo@semcog.org)  
Fax: 313-961-4869

**David Bee, Director**

West Michigan Regional Planning Comm.  
820 Monroe NW, Suite 214  
Grand Rapids, Michigan 49503  
Telephone: 616-774-8400  
Email: [dbee@wmrpc.org](mailto:dbee@wmrpc.org)  
Fax: 616-774-0808

**Susan Mortel, Director**

Bureau of Transportation Planning  
Michigan Department of Transportation  
P.O. Box 30050  
Lansing, Michigan 48909  
Telephone: 517-373-0343  
Email: [mortels@michigan.gov](mailto:mortels@michigan.gov)  
Fax: 517-241-3862

**Kirk Steudle, Chief Deputy Director**

Michigan Department of Transportation  
P.O. Box 30050  
Lansing, Michigan 48909  
Telephone: 517-373-2114  
Email: [steudlek@michigan.gov](mailto:steudlek@michigan.gov)  
Fax: 517-373-6457

**Jerry Richards, Township Manager**

Meridian Charter Township  
5151 Marsh Road  
Okemos, Michigan 48864  
Telephone: 517-349-1200 #317  
Email: [richards@meridian.mi.us](mailto:richards@meridian.mi.us)  
Fax: 517-349-0506

**Howard Heidemann, Commissioner**

St. Clair County Board of Commissioners  
200 Grand River , Suite 203  
Port Huron. Michigan 48060  
Telephone: 810-984-3850  
Email: [hheidemann@stclaircounty.org](mailto:hheidemann@stclaircounty.org)  
Fax: 810-985-3463



**Eric Swanson, Director**

Center for Geographic Information  
Michigan Department of Information  
Technology  
111 S Capitol Avenue  
Lansing, MI 48913  
Telephone: 517-373-7910  
Email: [swansone@michigan.gov](mailto:swansone@michigan.gov)  
Fax: 517-373-2939

**Frank Kelley, Commission Advisor**

State Transportation Commission  
Michigan Department of Transportation  
P.O. Box 30050  
Lansing, Michigan 48909  
Telephone: 517-373-2111  
Email: [KelleyF@michigan.gov](mailto:KelleyF@michigan.gov)

**Rob Surber, Deputy Director**

Center for Geographic Information  
Michigan Department of Information  
Technology  
111 S. Capitol Avenue  
Lansing, Michigan 48913  
Telephone: 517-373-7910  
Email: [surberr@michigan.gov](mailto:surberr@michigan.gov)  
Fax: 517-373-2939

**Rick Lilly, Asset Mgt. Coordinator**

Bureau of Transportation Planning  
Michigan Department of Transportation  
P.O. Box 30050  
Lansing, Michigan 48909  
Telephone: 517-335-2606  
Email: [lillyr@michigan.gov](mailto:lillyr@michigan.gov)



### **PASER PHOTOS**

The following photos are taken from various manuals published by the Transportation Information Center, University of Wisconsin-Madison.

ASPHALT -- 10

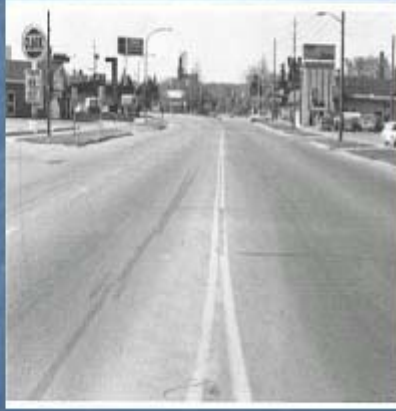


ASPHALT -- 9





## ASPHALT -- 8



## ASPHALT -- 7





## ASPHALT -- 6



## ASPHALT -- 5





## ASPHALT -- 4



## ASPHALT -- 3





## ASPHALT -- 2



## ASPHALT -- 1





## CONCRETE -- 10



## CONCRETE -- 9





## CONCRETE -- 8



## CONCRETE -- 7





## CONCRETE -- 6



## CONCRETE -- 5

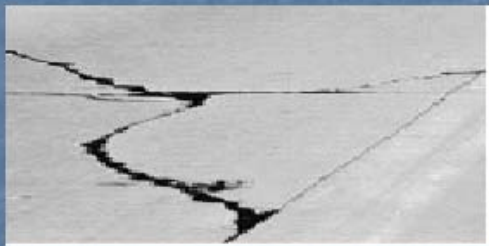




## CONCRETE -- 5



## CONCRETE -- 4





## CONCRETE -- 3



## CONCRETE -- 2





## CONCRETE -- 1



## GRAVEL -- 10





## GRAVEL -- 8



## GRAVEL -- 6





## GRAVEL -- 4



## GRAVEL -- 2





# GRAVEL -- 1





## **DEFINITIONS**

**Alligator Cracking:** Interconnected cracks in asphalt pavement forming small pieces ranging in size from one inch to approximately six inches. They tend to be irregular in shape. Alligator cracks are caused by repeated traffic loadings and are generally located in traffic areas such as the wheel paths.

**Arterials:** A designation of a roadway from the National Functional Classification. Arterials are divided into subcategories of *principal* and *minor*. Principal arterials are at the top of the hierarchy. They generally carry long-distance, through travel movements. They also provide access to important traffic generators such as major airports or regional shopping centers. Examples of principal arterials include freeways, major U. S. routes, state trunk lines between large cities, and important streets in large cities.

Minor arterials are similar in function to principal arterials, except they carry trips of a shorter distance and to lesser traffic generators. Examples include state routes between smaller cities, surface streets of medium importance in large cities, and important surface streets in large and small cities.

Principal Arterials are designated in the Framework as NFC routes by the following numbers:

- 1 – Rural Interstate
- 2 – Rural Other Principal Arterial
- 5 – Rural Other Freeway
- 11 – Urban Interstate
- 12 – Urban Other Freeway
- 14 – Urban Other Principal Arterial

Minor arterials are designated in the Framework as NFC routes by the following numbers:

- 6 – Rural Minor Arterial
- 16 – Urban Minor Arterial

**Asphalt Pavement:** Pavement consisting of fine and coarse aggregates held together by bituminous cement. Also referred to as a flexible pavement.

**Block Cracking:** Block cracking divides the pavement surface into rectangular shaped pieces with cracks that intersect at about 90 degrees. This type of distress differs from alligator cracking in that alligator cracks form smaller, irregular shaped pieces with sharp angles. Block cracking is caused principally by shrinkage of the pavement and daily temperature cycling.

**Bridge:** A structure, including supports, built over a depression, watercourse, highway, railroad or other obstruction, with a clear span of more than 20 feet measured along the center of the roadway.

**Bridge Rehabilitation:** Activities that improve element integrity including overlays; superstructure or substructure repairs; and substructure replacement.

**Bridge Replacement:** Activities that replace elements including deck replacement, superstructure replacement; and complete bridge replacement.



**Capital Preventive Maintenance:** Capital preventive maintenance is a planned set of cost effective treatments to an existing roadway system and its appurtenances that preserves, retards future deterioration and maintains or improves the functional condition of the system without (significantly) increasing structural capacity. The purpose of capital preventive maintenance fixes is to protect the pavement structure, slow the rate of pavement deterioration and/or correct pavement surface deficiencies. Surface treatments are targeted at pavement surface defects primarily caused by the environment and by pavement material deficiencies. Examples of CPM treatments include:

- Non-structural bituminous overlay (One inch or less)
- Surface milling and non-structural bituminous overlay
- Chip seals
- Micro-surfacing
- Overband crack filling
- Bituminous shoulder ribbons
- Full-depth concrete pavement repairs
- Joint resealing
- Joint and surface spall repair
- Diamond grinding
- Dowel bar retrofit
- Open-graded underdrain outlet clean out and repair
- Crack repair (clean and seal, saw and seal, rout and seal)
- Seal coating (fog seal, pavement rejuvenator, sand seal, slurry seal)
- Patching

“These fixes mitigate or delay deterioration while the pavement subgrade is in good condition. CPM is intended to address pavement problems before the structural integrity of the pavement has been impacted.” (“Status of Pavement Management Systems [PMS] in Southeast Michigan,” SEMCOG, May 2003, p. 18) Capital preventive maintenance is applied to pavements having a remaining service life of 3 years or more. This category applies to roads with PASER ratings of 5, 6, or 7.

**Collectors:** A designation of a roadway from the National Functional Classification. Collectors tend to provide more access to property than do arterials. Collectors also funnel traffic from residential or rural areas to arterials. Examples of collector roads include county, farm-to-market roads, and various connecting streets in large and small cities. Collectors are designated in the Framework as NFC routes by the following numbers:

- 7 – Rural Major Collector
- 8 – Rural Minor Collector
- 17 – Urban Collector

**Composite Pavement:** Pavement consisting of asphalt overlaying a concrete base.

**Concrete Pavement:** Pavement consisting of Portland cement, fine and coarse aggregates, and perhaps steel-reinforcing rods. Also referred to as a rigid pavement.

**Crack Sealing:** Process where cracks in a pavement are filled in with material to prevent the infiltration of water.

**Culvert:** A structure, including supports, built over a depression, watercourse, highway, railroad or other obstruction, with a clear span of less than 20 feet measured along the



center of roadway.

**Deflection:** A load induced, downward movement of a pavement section.

48

**Design Service Life:** Expected lifespan of a road based on pavement type, base and subbase, thickness, drainage, and traffic.

**Deterioration:** The breaking up of pavement due to traffic or weathering.

**Distortion:** Movement of a pavement away from its initial position.

**Fracture:** Fatigue cracking and thermal cracking distresses suffered by pavement.

**Friction:** The ability of a pavement surface to resist skidding.

**Grade Separation:** A structure that provides for highway traffic, pedestrian traffic, or utilities to pass over or under another highway or the tracks of a railway.

**Highway:** A general term denoting a public way for purposes of vehicular travel, including the entire area within the right of way.

**Joint Efficiency:** The ability of a concrete pavement to transfer loads from one slab to the next.

**Maintenance/Bridges:** Activities that sustain a bridge condition and restore element integrity. Typical work activities include clean/repair drainage systems; spot painting; joint gland repair/replace; concrete patching, sealing, crack sealing; joint replacement; pins & hanger replacement; painting; and thin overlays.

**Median:** The portion of a divided highway separating the traveled ways.

**Overlay:** Process where a new course of asphalt or concrete is put on top of the existing pavement.

**PASER (Pavement Surface Evaluation and Rating):** A visual method used to rate pavement condition. Often referred to as a “windshield” survey.

**Pavement Structure:** All combinations of subbase, base course, and surface course, including shoulders, placed on a subgrade.

**Project:** A specific section of the highway or property on which the construction operation is to be performed as described in the contract.

**Project Limits:** The physical limits given in the contract showing the points of beginning and ending of the work included in the project.

**Raveling:** Progressive loss of pavement material from the surface downward.

**Reactive Maintenance:** Reactive maintenance is an activity that must be done in response to events beyond the control of the agency. Reactive maintenance cannot be scheduled because events occur without warning and often must be immediately addressed. Examples of reactive maintenance activities include:

Snow plowing

Pothole patching

Removing and patching pavement blowups

**Remaining Service Life:** Estimated time, in years, before a pavement will fail.

**Right-of-Way:** A general term denoting land, property or interest therein acquired for or devoted to a highway, as shown on the plans.

**Roadbed:** The portion of the roadway between the outside edges of finished shoulders, or the outside edges of berm immediately back of curbs or gutters, when constructed.

**Roadside:** The portion of the right-of-way outside of the roadway.

**Roadway:** The portion of the right-of-way required for construction, limited by the outside edges of slopes and including ditches, channels, and all structures pertaining to



the work.

**Roughness:** Irregularities in the pavement surface that adversely affects ride quality, safety, and vehicle maintenance costs.

**Routine Maintenance:** Routine maintenance is the day-to-day maintenance activities that are scheduled. Examples of routine maintenance activities include: street sweeping, drainage clearing, shoulder gravel grading, and sealing cracks to prevent standing water and water penetration. This category applies to roads with PASER ratings of 8, 9, or 10.

**Rutting:** Displacement of material, creating channels in the pavement along the wheel paths.

**Sealcoat:** A Sealcoat surfaced road is a gravel road that has been treated with an asphalt sealcoat in order to maintain the ride, weather-proof the surface, and eliminate dust problems. The service life is generally about 5 years.

**Shoulder:** The portion of the roadway adjacent to the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.

**Sidewalk:** That portion of the roadway primarily constructed for pedestrian use.

**Structural Improvements:** This category includes work typical identified as rehabilitation and reconstruction which address the structural integrity of a road. This category applies to PASER ratings of 1, 2, 3, and 4.

Rehabilitation: Any fix that has an estimated design or fix life of ten to twenty years.

Rehabilitation fixes include:

Two or three course bituminous overlays

Concrete patching and diamond grinding

Crush and shape with bituminous overlay

Rubblize and multiple course bituminous overlay

Unbonded concrete overlays

Longitudinal and transverse joint repairs

Reconstruction: Any fix that typically removes and replaces the entire pavement structure. Reconstruction fixes have a design life of twenty years or more.

**Subbase:** The layer of specified material placed on the subgrade as a part of the pavement structure.

**Subgrade:** The portion of the earth grade upon which the pavement structure is placed.

**Substructure:** All of the structure below the bearings of simple and continuous spans, the skewbacks of arches, and the tops of footings of rigid frames, including backwalls, wing walls, and wing protection railings; except backwalls designed integrally with the superstructure.

**Superstructure:** All of a structure not classified as substructure.

**Surface Course:** The top layer of a pavement structure.

**Total Dollars Awarded:** The cost of a project as indicated in the agency's formal execution of the contract.

**Traffic Control Devices:** Signs, signals, lighting devices, barricades, delineators, pavement markings, traffic regulators and all other equipment for protecting and regulating traffic in accordance with the MMUTCD, unless otherwise specified in the contract.

**Traffic Lane:** The portion of the traveled way used for the movement of a single line of vehicles.



**Traveled Way:** The portion of the roadway designated for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

**Treatment:** A mitigating measure used to repair a pavement.

**Utility:** Properties of railway, telegraph, telephone, water, sewer, electric, gas, petroleum, cable television and similar companies.

**Work:** The furnishing of all labor, materials, equipment, and other items necessary to complete the project according to the contract.

**Work Order:** A written order by the engineer requiring performance by the contractor.

These definitions have been culled from the following sources:

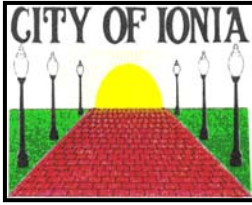
“Alternate Bid Study M-6 South Beltline,” Michigan Department of Transportation, October 4, 2000

“2003 Standard Specifications for Construction,” Michigan Department of Transportation, February 2003

“Status of Pavement Management Systems (PMS) in Southeast Michigan,” SEMCOG, May 2003

PASER Manuals, Transportation Information Center, University of Wisconsin-Madison





## **Notice of Small Urban Task Force**

The Small Urban Area Task Force, created for the purposes of identifying projects that may be funded with Federal Transportation dollars under the Transportation Efficiency Act – 21 (TEA-21), held a meeting on Friday, March 26, 2004 at 1:00 p.m. in the Conference Room of Ionia City Hall, 114 N. Kidd Street, Ionia, MI

For informational purposes: the Small Urban Task Force consists of representatives from the City of Ionia, Ionia Transportation Authority (Dial-A-Ride), and the Ionia County Road Commission. The Task Force prepares a Transportation Improvement Plan for projects located in the Ionia Urban Area. The Urban Area roughly has boundaries of Tuttle Road on the South; Prairie Creek/Kelsey Highway on the east; Harwood Road on the west; and Apple Tree Drive on the north. The Improvement Plan may include any roads within that boundary but they must be eligible for federal aid which means they are normally "Major Streets." Only Major Streets are eligible for funding under TEA-21; local streets receive no funds from the federal aid funds.

At the meeting, the following projects were approved for submittal to the Michigan Department of Transportation for consideration and/or inclusion in the State's Transportation Improvement Plan for Small Urban Areas:

### **2005**

- Structural Improvement: Morse Street from Lincoln Avenue south to East Washington Street.
- Structural Improvement: East Washington Street from Jefferson Street to the Morse Street.

### **2006**

- Yeomans Street from M-21 to City limits.
- Bus Replacement for Ionia Dial A Ride (3)
- Preventive Maintenance: Mill Street from East Main to the south end
- Preventive Maintenance: Union Street from Washington to Lincoln Avenue

### **2007**

- Structural Improvement: Cyrus Street from Lincoln Avenue to North Street
- Structural Improvement: State Street from Lincoln Avenue to Hackett Street
- Structural Improvement: Hackett Street
- Structural Improvement: Harter Street
- Structural Improvement: High Street from Harter to Dexter

The terms used for work on the streets are specified under the State of Michigan Asset Management Strategy that has been adopted by the City of Ionia. Work is broken into three categories: Routine Maintenance (crack sealing, small potholes); Preventive Maintenance (mill and overlay); and Structural Improvement (reconstruction).

If you have comments on the identified projects or wish to have other projects considered under the three year TIP, you may e-mail your comments to: [ioniamanager@city.ionia.mi.us](mailto:ioniamanager@city.ionia.mi.us); fax the comments to: (616) 527-0810; or mail the recommendations and comments to: Ionia Manager, P.O. Box 496, Ionia, MI 48846.

For purposes of priority, the first project listed in each year is the number one priority; second is second priority, etc.